



TEST REPORT
EN IEC 62368-1
Audio/video, information and communication technology equipment
Part 1: Safety requirements

Report Number.....: ZKT-2207054572S

Date of issue.....: Jul. 12, 2022

Total number of pages.....: 90 Page

Name of Testing Laboratory preparing the Report.....: Shenzhen ZKT Technology Co., Ltd.
1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name.....: SHENZHEN ITOONER TECHNOLOGY CO.,LTD

Address.....: Building 2&Building 3(The 3rd and 4th Floor) GangZai Road,Shangxing Community,Xinqiao Street,Baoan District, Shenzhen, Guangdong, China

Test specification:

Standard.....: EN IEC 62368-1:2020+A11:2020

Test procedure.....: CE-LVD

Non-standard test method.....: N/A

TRF template used.....: IECEE OD-2020-F1:2020, Ed.1.3

Test Report Form No.....: IEC62368_1E

Test Report Form(s) Originator.....: UL(US)

Master TRF.....: Dated 2021-02-04

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General disclaimer:

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Test item description.....: Monitor

Trade Mark.....: N/A

Manufacturer.....: Same application

Model/Type reference.....: GNT-L324KA
GNT-L222K0, GNT-L222KA, GNT-L324KA, GNT-L434KA, GNT-L504KA, GNT-L554KA, GNT-L654KA, GNT-LXXXXKA.

Ratings.....: Input: AC 90-240V, 50/60 Hz, 50W



Testing procedure and testing location:

Testing Laboratory :

Shenzhen ZKT Technology Co., Ltd.

Address :

1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

Date of Test :

Jul. 05, 2022 to Jul. 12, 2022

Tested by (name + signature) :

Peter Huang

Reviewer by (name + signature) :

Simon Gong

Approved by (name + signature) :

Awen He



**List of Attachments (including a total number of pages in each attachment):**

Attachment 1: 21 pages (National deviation)

Attachment 2: 3 pages (Photo)

Summary of testing:**Tests performed (name of test and test clause):**

The submitted samples were found to comply with the requirements of:

- EN IEC 62368-1:2020+A11:2020

Testing location:**Shenzhen ZKT Technology Co., Ltd.**

1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

Copy of marking plate:**The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.**

Monitor

Model:GNT-L324KA

Input: AC 90-240V, 50/60 Hz, 50W



Manufacturer: SHENZHEN ITOONER TECHNOLOGY CO.,LTD


Address: Building 2&Building 3(The 3rd and 4th Floor) GangZai Road,Shangxing Community,Xinqiao Street,Baoan District, Shenzhen, Guangdong, China

Made in China

Notes:

The above labels are draft of an artwork for marking plate pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.



1. The height of graphical symbols “” shall not be less than 7 mm;
2. The main rating label was attached in enclosure.



Test item particulars:		
Product group	<input checked="" type="checkbox"/> end product	<input type="checkbox"/> built-in component
Classification of use by	<input checked="" type="checkbox"/> Ordinary person	<input checked="" type="checkbox"/> Children likely present
	<input checked="" type="checkbox"/> Instructed person	
	<input checked="" type="checkbox"/> Skilled person	
Supply connection	<input checked="" type="checkbox"/> AC mains	<input type="checkbox"/> DC mains
	<input type="checkbox"/> not mains connected:	
	<input type="checkbox"/> ES1	<input type="checkbox"/> ES2 <input checked="" type="checkbox"/> ES3
Supply tolerance	<input checked="" type="checkbox"/> +10%/-10%	
	<input type="checkbox"/> +20%/-15%	
	<input type="checkbox"/> + %/ - %	
	<input type="checkbox"/> None	
Supply connection – type	<input checked="" type="checkbox"/> pluggable equipment type A -	
	<input type="checkbox"/> non-detachable supply cord	
	<input checked="" type="checkbox"/> appliance coupler	
	<input type="checkbox"/> direct plug-in	
	<input type="checkbox"/> pluggable equipment type B -	
	<input type="checkbox"/> non-detachable supply cord	
	<input type="checkbox"/> appliance coupler	
	<input type="checkbox"/> permanent connection	
	<input type="checkbox"/> mating connector	
	<input type="checkbox"/> other:	
Considered current rating of protective device	<input checked="" type="checkbox"/> 13A for building; 6.3A for equipment.	
	Location:	<input checked="" type="checkbox"/> building <input checked="" type="checkbox"/> equipment
Equipment mobility	<input type="checkbox"/> movable	<input type="checkbox"/> hand-held <input type="checkbox"/> transportable
	<input type="checkbox"/> direct plug-in	<input type="checkbox"/> stationary <input type="checkbox"/> for building-in
	<input checked="" type="checkbox"/> wall/ceiling-mounted	<input type="checkbox"/> SRME/rack-mounted
	<input type="checkbox"/> other:	
Overvoltage category (OVC)	<input type="checkbox"/> OVC I	<input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III
	<input type="checkbox"/> OVC IV	<input type="checkbox"/> other:
Class of equipment	<input checked="" type="checkbox"/> Class I	<input type="checkbox"/> Class II <input type="checkbox"/> Class III
	<input type="checkbox"/> Not classified	<input type="checkbox"/>
Special installation location	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> restricted access area
	<input type="checkbox"/> outdoor location	<input type="checkbox"/>
Pollution degree (PD)	<input type="checkbox"/> PD 1	<input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
Manufacturer's specified T_{ma}	25°C	<input type="checkbox"/> Outdoor: minimum °C
IP protection class	<input checked="" type="checkbox"/> IPX0	<input type="checkbox"/> IP__
Power systems	<input checked="" type="checkbox"/> TN	<input type="checkbox"/> TT <input type="checkbox"/> IT - V _{LL}
	<input type="checkbox"/> not AC mains	
Altitude during operation (m)	<input type="checkbox"/> 2000 m or less	<input checked="" type="checkbox"/> 5000 m
Altitude of test laboratory (m)	<input type="checkbox"/> 2000 m or less	<input checked="" type="checkbox"/> <50 m
Mass of equipment (kg)	Approx 30.0 kg	



Possible test case verdicts:	
- test case does not apply to the test object.... : N/A	
- test object does meet the requirement..... : P (Pass)	
- test object does not meet the requirement.... : F (Fail)	
Testing:	
Date of receipt of test item..... : Jul. 05, 2022	
Date (s) of performance of tests..... : Jul. 05, 2022 to Jul. 12, 2022	
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.	
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC60950-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided..... :	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)..... :	SHENZHEN ITOONER TECHNOLOGY CO.,LTD Building 2&Building 3(The 3rd and 4th Floor) GangZai Road,Shangxing Community,Xinqiao Street,Baoan District, Shenzhen, Guangdong, China
General product information and other remarks:	
Product Description:	
1. This apparatus is Monitor used for information technology equipment or audio/video equipment.	
2. The main enclosure is metal, the accessible metal enclosure grounded.	
3. The apparatus is an integrated with portion by appliance coupler.	
4. The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 25°C.	
5. The product installation method is only wall hanging.	
6. Model differences: All models are same except for the screen size.	



OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS				
Clause	Possible Hazard			
5	Electrically-caused injury			
Class and Energy Source (e.g. ES3: Primary circuit)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
ES3: Primary circuits supplied by a.c. mains supply	Ordinary	N/A	N/A	Enclosure, see 5.3.2, 5.4.2, 5.4.3, 5.5.3, 5.5.4
ES1: All data ports	Ordinary	N/A	N/A	N/A
6	Electrically-caused fire			
Class and Energy Source (e.g. PS2: 100 Watt circuit)	Material part (e.g. Printed board)	Safeguards		
		B	1 st S	2 nd S
PS3	Enclosure	See 6.3.1	See 6.4.3, 6.4.7	N/A
PS3	Internal / external wiring	See 6.3.1	See 6.5 (Equipment safeguards, rated VW-1)	N/A
PS3	PCB	See 6.3.1	V-0	N/A
PS3	Other combustible components / materials	See 6.3.1	See 6.4.5, 6.4.6	N/A
All data ports				
7	Injury caused by hazardous substances			
Class and Energy Source (e.g. Ozone)	Body Part (e.g., Skilled)	Safeguards		
		B	S	R
Lithium	Ordinary	N/A	N/A	Annex M
8	Mechanically-caused injury			
Class and Energy Source (e.g. MS3: Plastic fan blades)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
MS3: Equipment Mass	Ordinary	N/A	N/A	N/A
MS1: Sharp edges and corner of product	Ordinary	N/A	N/A	N/A
MS3: Wall mount	Ordinary	Robust mounting mean used (complied with clause 8.7)	Installation safeguard was mentioned in user manual	N/A
9	Thermal burn			
Class and Energy Source	Body Part	Safeguards		



(e.g. TS1: Keyboard caps)	(e.g., Ordinary)	B	S	R
TS1: All accessible parts	Ordinary	N/A	N/A	N/A
10	Radiation			
Class and Energy Source (e.g. RS1: PMP sound output)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
RS1: LED backlight of LCD panel	Ordinary	N/A	N/A	N/A
RS1: LED indicator light	Ordinary	N/A	N/A	N/A
Supplementary Information: “B” – Basic Safeguard; “S” – Supplementary Safeguard; “R” – Reinforced Safeguard				

ENERGY SOURCE DIAGRAM

Optional. Manufacturers are to provide the energy sources diagram identify declared energy sources and identifying the demarcations are between power sources. Recommend diagram be provided included in power supply and multipart systems.

Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings

ES PS MS TS RS



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4	GENERAL REQUIREMENTS		P
4.1.1	Acceptance of materials, components and subassemblies	(See appended Table 4.1.2.)	P
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment. See also Annex G	P
4.1.3	Equipment design and construction	Evaluation of safeguards regarding access to ES3, and protection in regard to risk of spread of fire, mechanical-caused injury and thermal burn considered.	P
4.1.4	Specified ambient temperature for outdoor use (°C) :		N/A
4.1.5	Constructions and components not specifically covered		P
4.1.8	Liquids and liquid filled components (LFC)	No such parts used.	N/A
4.1.15	Markings and instructions	(See Annex F)	P
4.4.3	Safeguard robustness	See below	P
4.4.3.1	General		P
4.4.3.2	Steady force tests	(See Annex T.2 and T.5)	P
4.4.3.3	Drop tests		N/A
4.4.3.4	Impact tests	(See Annex T.6)	P
4.4.3.5	Internal accessible safeguard tests		N/A
4.4.3.6	Glass impact tests		N/A
4.4.3.7	Glass fixation tests	(See Annex T.9)	P
	Glass impact test (1J)		P
	Push/pull test (10 N)		P
4.4.3.8	Thermoplastic material tests		N/A
4.4.3.9	Air comprising a safeguard		N/A
4.4.3.10	Accessibility, glass, safeguard effectiveness		N/A
4.4.4	Displacement of a safeguard by an insulating liquid		N/A
4.4.5	Safety interlocks		N/A
4.5	Explosion		P



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Clause	Requirement + Test	Result - Remark	Verdict
4.5.1	General		P
4.5.2	No explosion during normal/abnormal operating condition	(See Clause B.2, B.3)	P
	No harm by explosion during single fault conditions	(See Clause B.4)	P
4.6	Fixing of conductors		P
	Fix conductors not to defeat a safeguard		P
	Compliance is checked by test..... :	10 N pull / push test performed for all relevant conductors.	P
4.7	Equipment for direct insertion into mains socket-outlets		N/A
4.7.2	Mains plug part complies with relevant standard... :	Not direct plug-in equipment.	N/A
4.7.3	Torque (Nm)..... :		N/A
4.8	Equipment containing coin/button cell batteries		N/A
4.8.1	General	No coin/button batteries used.	N/A
4.8.2	Instructional safeguard..... :		N/A
4.8.3	Battery compartment door/cover construction		N/A
	Open torque test		N/A
4.8.4.2	Stress relief test		N/A
4.8.4.3	Battery replacement test		N/A
4.8.4.4	Drop test		N/A
4.8.4.5	Impact test		N/A
4.8.4.6	Crush test		N/A
4.8.5	Compliance		N/A
	30N force test with test probe		N/A
	20N force test with test hook		N/A
4.9	Likelihood of fire or shock due to entry of conductive object		P
4.10	Component requirements		P
4.10.1	Disconnect Device	Switches and coupler	P
4.10.2	Switches and relays	(See Annex G.1 and G.2)	P

5	ELECTRICALLY-CAUSED INJURY		P
5.2	Classification and limits of electrical energy sources		P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current limits..... :	(See appended table 5.2)	P
5.2.2.3	Capacitance limits..... :	(See appended table 5.2)	P
5.2.2.4	Single pulse limits..... :		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.5	Limits for repetitive pulses..... :		N/A
5.2.2.6	Ringing signals		N/A
5.2.2.7	Audio signals	(See Clause E.1)	P
5.3	Protection against electrical energy sources		P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	See below.	P
5.3.1 a)	Accessible ES1/ES2 derived from ES2/ES3 circuits		P
5.3.1 b)	Skilled persons not unintentional contact ES3 bare conductors		N/A
5.3.2.1	Accessibility to electrical energy sources and safeguards	ES2 or ES3 source cannot access by ordinary persons	P
	Accessibility to outdoor equipment bare parts	No outdoor equipment.	N/A
5.3.2.2	Contact requirements		P
	Test with test probe from Annex V	Figure V.1, V.2 can't contact any bare internal conductive part	—
5.3.2.2 a)	Air gap – electric strength test potential (V)..... :	(See appended table 5.4.9)	N/A
5.3.2.2 b)	Air gap – distance (mm) :	>0.2	P
5.3.2.3	Compliance		P
5.3.2.4	Terminals for connecting stripped wire	No such terminals	N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material	Hygroscopic materials are not used for insulating material.	P
5.4.1.3	Material is non-hygroscopic	(See clause 5.4.8)	P
5.4.1.4	Maximum operating temperature for insulating materials..... :	(See appended table 5.4.1.4, 6.3.2, 9.0, B.2.6)	P
5.4.1.5	Pollution degrees..... :	PD2	P
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	Pollution degree 2 is applied.	N/A
5.4.1.5.3	Thermal cycling test		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage..... :	(See appended table 5.4.1.8)	P
5.4.1.9	Insulating surfaces	Considered.	P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		P
5.4.1.10.2	Vicat test..... :		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.10.3	Ball pressure test..... :	(See appended table 5.4.1.10.3)	P
5.4.2	Clearances	(See appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	P
5.4.2.1	General requirements		P
	Clearances in circuits connected to AC Mains, Alternative method	(See Annex X)	N/A
5.4.2.2	Procedure 1 for determining clearance	(See appended table 5.4.2, 5.4.3)	P
	Temporary overvoltage :	2000Vpeak.	—
5.4.2.3	Procedure 2 for determining clearance	(See appended table 5.4.2, 5.4.3)	P
5.4.2.3.2.2	a.c. mains transient voltage..... :	2500Vpeak.	—
5.4.2.3.2.3	d.c. mains transient voltage :	--	—
5.4.2.3.2.4	External circuit transient voltage..... :	--	—
5.4.2.3.2.5	Transient voltage determined by measurement..... :	--	—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test :	(See appended table 5.4.2)	N/A
5.4.2.5	Multiplication factors for clearances and test voltages :		N/A
5.4.2.6	Clearance measurement..... :	(See appended table 5.4.2, 5.4.3)	P
5.4.3	Creepage distances	(See appended table 5.4.2, 5.4.3)	P
5.4.3.1	General	See below.	P
5.4.3.3	Material group..... :	IIIa or IIIb	—
5.4.3.4	Creepage distances measurement..... :	(See appended table 5.4.3)	P
5.4.4	Solid insulation	See below	P
5.4.4.1	General requirements		P
5.4.4.2	Minimum distance through insulation :	(See appended table 5.4.4.2, 5.4.4.5 c), 5.4.4.9)	P
5.4.4.3	Insulating compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices	Approved optocoupler used. Requirements of G.12 met, see table 4.1.2 for listed component used.	P
5.4.4.5	Insulating compound forming cemented joints	No such construction within the EUT	N/A
5.4.4.6	Thin sheet material		P



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Clause	Requirement + Test	Result - Remark	Verdict
5.4.4.6.1	General requirements	At least 2 layers of insulation tape are used for reinforced insulation and are not expected to be subject to handling or abrasion during ordinary or instructed person servicing.	P
5.4.4.6.2	Separable thin sheet material	Two layers of insulating tape provided as double/reinforced insulation and each layer passed the electric strength test for reinforced insulation. See appended Table 5.4.9.	P
	Number of layers (pcs)	2-layer min.	P
5.4.4.6.3	Non-separable thin sheet material		N/A
	Number of layers (pcs)		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material.....		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components	(See G.5.3 and G.6.1)	P
5.4.4.9	Solid insulation at frequencies >30 kHz, E_P , K_R , d , V_{PW} (V).....	(See appended table 5.4.4.9)	P
	Alternative by electric strength test, tested voltage (V), K_R	(See appended Tables 5.4.4.9 and 5.4.9)	N/A
5.4.5	Antenna terminal insulation		P
5.4.5.1	General		P
5.4.5.2	Voltage surge test	Surge test with 50 discharges at a maximum rate of 12/min from a 1 nF capacitor charged to 10 kV performed.	P
5.4.5.3	Insulation resistance (M Ω).....	Measured 100M Ω between mains supply to secondary circuit.	P
	Electric strength test.....		N/A
5.4.6	Insulation of internal wire as part of supplementary safeguard		N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		P
	Relative humidity (%), temperature ($^{\circ}$ C), duration (h).....	95%, 30 $^{\circ}$ C, 48h	—
5.4.9	Electric strength test	(See appended table 5.4.9)	P
5.4.9.1	Test procedure for type test of solid insulation.....	Method 1 used.	P




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Clause	Requirement + Test	Result - Remark	Verdict
5.4.9.2	Test procedure for routine test		N/A
5.4.10	Safeguards against transient voltages from external circuits		N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test..... :		N/A
5.4.10.2.3	Steady-state test..... :		N/A
5.4.10.3	Verification for insulation breakdown for impulse test..... :		N/A
5.4.11	Separation between external circuits and earth		N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	SPDs bridge separation between external circuit and earth		N/A
	Rated operating voltage U_{op} (V)..... :		—
	Nominal voltage U_{peak} (V)..... :		—
	Max increase due to variation ΔU_{sp} :		—
	Max increase due to ageing ΔU_{sa} :		—
5.4.11.3	Test method and compliance..... :		N/A
5.4.12	Insulating liquid		N/A
5.4.12.1	General requirements		N/A
5.4.12.2	Electric strength of an insulating liquid..... :		N/A
5.4.12.3	Compatibility of an insulating liquid..... :		N/A
5.4.12.4	Container for insulating liquid..... :		N/A
5.5	Components as safeguards		P
5.5.1	General		P
5.5.2	Capacitors and RC units	Approved X capacitor and Y capacitor provided. (See appended table 4.1.2)	P
5.5.2.1	General requirement		P
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector..... :	(See appended table 5.5.2.2)	P
5.5.3	Transformers	(See Annex G.5.3)	P
5.5.4	Optocouplers	(See Annex G.12)	P
5.5.5	Relays	No such relay used as safeguard	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
5.5.6	Resistors	No such resistor used	N/A
5.5.7	SPDs	No such varistor used	N/A
5.5.8	Insulation between the mains and an external circuit consisting of a coaxial cable..... :		N/A
5.5.9	Safeguards for socket-outlets in outdoor equipment		N/A
	RCD rated residual operating current (mA)..... :		—
5.6	Protective conductor	Class I equipment	P
5.6.2	Requirement for protective conductors		P
5.6.2.1	General requirements	No switch, current limiting devices or overcurrent protective devices provided in protective earthing conductors and protective bonding conductors.	P
5.6.2.2	Colour of insulation	After appliance inlet, the insulation of protective bonding conductor is green-and-yellow.	P
5.6.3	Requirement for protective earthing conductors	An appliance inlet provided that is connected by an approved appliance coupler serves as main protective earthing conductor terminal.	P
	Protective earthing conductor size (mm ²) :	0.75mm ²	—
	Protective earthing conductor serving as a reinforced safeguard		P
	Protective earthing conductor serving as a double safeguard		N/A
5.6.4	Requirements for protective bonding conductors	Reliable connection of the green-and-yellow protective bonding wire from earthed pin of appliance inlet to metal chassis, which fixed in earthing tab of appliance inlet by hooking-in and soldering, and the other end terminated in a ring type crimp which is secured to metal chassis by a screw and star washer.	P
5.6.4.1	Protective bonding conductors	See the following details.	P
	Protective bonding conductor size (mm ²)..... :	0.75 mm ² (18 AWG) for protective bonding conductor.	—
5.6.4.2	Protective current rating (A)..... :	≤ 25 A.	P



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Clause	Requirement + Test	Result - Remark	Verdict
5.6.5	Terminals for protective conductors	Symbol  used. In addition, the green-and-yellow wire connected to metal chassis was considered as protective bonding conductor. See also subclause 5.6.6.	P
5.6.5.1	Terminal size for connecting protective earthing conductors (mm)..... :	See above.	P
	Terminal size for connecting protective bonding conductors (mm)..... :	See above.	P
5.6.5.2	Corrosion	No combination above the line in Annex N is used.	P
5.6.6	Resistance of the protective bonding system	See below.	P
5.6.6.1	Requirements	Compliance checked.	P
5.6.6.2	Test Method..... :	(See appended table 5.6.6.2)	P
5.6.6.3	Resistance (Ω) or voltage drop..... :	(See appended table 5.6.6.2)	P
5.6.7	Reliable connection of a protective earthing conductor	The equipment is not permanently connected equipment.	N/A
5.6.8	Functional earthing		N/A
	Conductor size (mm^2)..... :		N/A
	Class II with functional earthing marking :		N/A
	Appliance inlet cl & cr (mm)..... :		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current	(See appended table 5.7.4)	P
5.7.2.2	Measurement of voltage	(See appended table 5.7.4)	P
5.7.3	Equipment set-up, supply connections and earth connections		P
5.7.4	Unearthed accessible parts..... :	Touch current at unearthed accessible conductive parts is not exceeding ES1 limits. (See appended table 5.7.4)	P
5.7.5	Earthed accessible conductive parts..... :		P
5.7.6	Requirements when touch current exceeds ES2 limits		N/A
	Protective conductor current (mA)..... :		N/A
	Instructional Safeguard..... :		N/A
5.7.7	Prospective touch voltage and touch current associated with external circuits		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
5.7.7.1	Touch current from coaxial cables		N/A
5.7.7.2	Prospective touch voltage and touch current associated with paired conductor cables		N/A
5.7.8	Summation of touch currents from external circuits		N/A
	a) Equipment connected to earthed external circuits, current (mA)..... :		N/A
	b) Equipment connected to unearthed external circuits, current (mA)..... :		N/A
5.8	Backfeed safeguard in battery backed up supplies		N/A
	Mains terminal ES..... :	(See appended table 5.8)	N/A
	Air gap (mm)..... :		N/A

6	ELECTRICALLY- CAUSED FIRE		P
6.2	Classification of PS and PIS		P
6.2.2	Power source circuit classifications..... :	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources	See below.	P
6.2.3.1	Arcing PIS :	Primary circuits are considered as arcing PIS.	P
6.2.3.2	Resistive PIS :	All components located within the EUT are considered as resistive PIS.	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials..... :	(See appended table 5.4.1.4, 9.3, B.1.5, B.2.6)	P
	Combustible materials outside fire enclosure..... :	V-0	P
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard method	Method of Control fire spread used.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		P
6.4.3.1	Supplementary safeguards		P
6.4.3.2	Single Fault Conditions..... :	(See appended table B.4)	P
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		P
6.4.5	Control of fire spread in PS2 circuits	See below.	P



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Clause	Requirement + Test	Result - Remark	Verdict
6.4.5.2	Supplementary safeguards	Compliance detailed as follows: - Printed board: rated V-1 or VTM-1 min. class material; - Internal wire: complying with 6.5. - Other components other than PCB and wires are mounted on PCB rated V-1 or VTM-1 min., or made of V-2, VTM-2 or HF2 min. - Isolating transformer: complying with G.5.3.	P
6.4.6	Control of fire spread in PS3 circuits	Compliance detailed as follows: - Parts as in 6.4.5 above - Fire enclosure: rated V-0 used.	P
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.2	Separation by distance		P
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers	Equipment enclosure was evaluated as a fire enclosure.	P
6.4.8.2	Fire enclosure and fire barrier material properties		P
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure		P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier	See below	P
6.4.8.3.1	Fire enclosure and fire barrier openings		P
6.4.8.3.2	Fire barrier dimensions		P
6.4.8.3.3	Top openings and properties		P
	Openings dimensions (mm)..... :	2.5mm x 29.2mm max.	P
6.4.8.3.4	Bottom openings and properties		P
	Openings dimensions (mm)..... :	1.8mm x 10.0mm max.	P
	Flammability tests for the bottom of a fire enclosure		N/A
	Instructional Safeguard..... :		N/A
6.4.8.3.5	Side openings and properties		P
	Openings dimensions (mm)..... :	Φ2.5mm max.	P
6.4.8.3.6	Integrity of a fire enclosure, condition met: a), b) or c)..... :		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.4	Separation of a PIS from a fire enclosure and a fire barrier distance (mm) or flammability rating..... :	Fire enclosure is made of V-0 material.	P
6.4.9	Flammability of insulating liquid..... :		N/A
6.5	Internal and external wiring		P
6.5.1	General requirements	The material of VW-1 on internal wiring were considered compliance equal to equivalent to IEC/EN 60695-11-21 relevant standards	P
6.5.2	Requirements for interconnection to building wiring	No such interconnection to building wiring.	N/A
6.5.3	Internal wiring size (mm ²) for socket-outlets..... :	No socket-outlet used.	N/A
6.6	Safeguards against fire due to the connection to additional equipment		P

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		N/A
7.2	Reduction of exposure to hazardous substances		N/A
7.3	Ozone exposure		N/A
7.4	Use of personal safeguards or personal protective equipment (PPE)		N/A
	Personal safeguards and instructions..... :		—
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010)..... :		—
7.6	Batteries and their protection circuits		N/A

8	MECHANICALLY-CAUSED INJURY		P
8.2	Mechanical energy source classifications		P
8.3	Safeguards against mechanical energy sources		P
8.4	Safeguards against parts with sharp edges and corners		N/A
8.4.1	Safeguards	MS1 applied for edges and corners.	N/A
	Instructional Safeguard..... :		N/A
8.4.2	Sharp edges or corners	Accessible edges and corners of the equipment are rounded and are classified as MS1.	P
8.5	Safeguards against moving parts		N/A
8.5.1	Fingers, jewellery, clothing, hair, etc., contact with MS2 or MS3 parts	No moving parts	N/A
	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
	Moving MS3 parts only accessible to skilled person		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
8.5.2	Instructional safeguard..... :		N/A
8.5.4	Special categories of equipment containing moving parts		N/A
8.5.4.1	General		N/A
8.5.4.2	Equipment containing work cells with MS3 parts		N/A
8.5.4.2.1	Protection of persons in the work cell		N/A
8.5.4.2.2	Access protection override		N/A
8.5.4.2.2.1	Override system		N/A
8.5.4.2.2.2	Visual indicator		N/A
8.5.4.2.3	Emergency stop system		N/A
	Maximum stopping distance from the point of activation (m)..... :		N/A
	Space between end point and nearest fixed mechanical part (mm)..... :		N/A
8.5.4.2.4	Endurance requirements		N/A
	Mechanical system subjected to 100 000 cycles of operation		N/A
	- Mechanical function check and visual inspection		N/A
	- Cable assembly..... :		N/A
8.5.4.3	Equipment having electromechanical device for destruction of media		N/A
8.5.4.3.1	Equipment safeguards		N/A
8.5.4.3.2	Instructional safeguards against moving parts..... :		N/A
8.5.4.3.3	Disconnection from the supply		N/A
8.5.4.3.4	Cut type and test force (N)..... :		N/A
8.5.4.3.5	Compliance		N/A
8.5.5	High pressure lamps		N/A
	Explosion test..... :		N/A
8.5.5.3	Glass particles dimensions (mm)..... :		N/A
8.6	Stability of equipment		P
8.6.1	General	MS3	P
	Instructional safeguard..... :	Instructional safeguard provided.	P
8.6.2	Static stability	See below.	P
8.6.2.2	Static stability test..... :	Tipped at 10°, the equipment did not tip over.	P
8.6.2.3	Downward force test		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
8.6.3	Relocation stability		N/A
	Wheels diameter (mm)..... :		—
	Tilt test		P
8.6.4	Glass slide test	Tipped at 10°, the equipment did not tip over and no slide.	P
8.6.5	Horizontal force test..... :		N/A
8.7	Equipment mounted to wall, ceiling or other structure		P
8.7.1	Mount means type..... :	Mounted to wall Mounting surface: L:55.33mm, Φ:6.04mm x 6pc	P
8.7.2	Test methods		P
	Test 1, additional downwards force (N)..... :	880N, The equipment or its associated mounting means not become dislodged and remain mechanically intact and secure during the test.	P
	Test 2, number of attachment points and test force (N)..... :	880N, The equipment or its associated mounting means not become dislodged and remain mechanically intact and secure during the test.	N/A
	Test 3 Nominal diameter (mm) and applied torque (Nm)..... :		N/A
8.8	Handles strength		N/A
8.8.1	General	No handle	N/A
8.8.2	Handle strength test		N/A
	Number of handles..... :		—
	Force applied (N)..... :		N/A
8.9	Wheels or casters attachment requirements		N/A
8.9.2	Pull test		N/A
8.10	Carts, stands and similar carriers		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions..... :		N/A
8.10.3	Cart, stand or carrier loading test		N/A
	Loading force applied (N)..... :		N/A
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Force applied (N)..... :		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
8.10.6	Thermoplastic temperature stability		N/A
8.11	Mounting means for slide-rail mounted equipment (SRME)		N/A
8.11.1	General		N/A
8.11.2	Requirements for slide rails		N/A
	Instructional Safeguard..... :		N/A
8.11.3	Mechanical strength test		N/A
8.11.3.1	Downward force test, force (N) applied..... :		N/A
8.11.3.2	Lateral push force test		N/A
8.11.3.3	Integrity of slide rail end stops		N/A
8.11.4	Compliance		N/A
8.12	Telescoping or rod antennas		N/A
	Button/ball diameter (mm)..... :		—

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications		P
9.3	Touch temperature limits		P
9.3.1	Touch temperatures of accessible parts..... :	(See appended table 9.3)	P
9.3.2	Test method and compliance		P
9.4	Safeguards against thermal energy sources		N/A
9.5	Requirements for safeguards		N/A
9.5.1	Equipment safeguard		N/A
9.5.2	Instructional safeguard..... :		N/A
9.6	Requirements for wireless power transmitters		N/A
9.6.1	General		N/A
9.6.2	Specification of the foreign objects		N/A
9.6.3	Test method and compliance..... :	(See appended table 9.6)	N/A

10	RADIATION		P
10.2	Radiation energy source classification		P
10.2.1	General classification	See Energy source identification and classification table.	P
	Lasers..... :		—
	Lamps and lamp systems..... :	RS1	—
	Image projectors..... :		—



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Clause	Requirement + Test	Result - Remark	Verdict
	X-Ray..... :		—
	Personal music player..... :		—
10.3	Safeguards against laser radiation		N/A
	The standard(s) equipment containing laser(s) comply..... :		N/A
10.4	Safeguards against optical radiation from lamps and lamp systems (including LED types)		P
10.4.1	General requirements	LED backlight and LED indicator are considered as RS1.	P
	Instructional safeguard provided for accessible radiation level needs to exceed		N/A
	Risk group marking and location..... :		N/A
	Information for safe operation and installation		N/A
10.4.2	Requirements for enclosures		N/A
	UV radiation exposure..... :	(See Annex C)	N/A
10.4.3	Instructional safeguard..... :		N/A
10.5	Safeguards against X-radiation		N/A
10.5.1	Requirements		N/A
	Instructional safeguard for skilled persons..... :		—
10.5.3	Maximum radiation (pA/kg)..... :	(See appended tables B.3, B.4)	—
10.6	Safeguards against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output $L_{Aeq,T}$, dB(A)..... :		N/A
	Unweighted RMS output voltage (mV)..... :		N/A
	Digital output signal (dBFS)..... :		N/A
10.6.3	Requirements for dose-based systems		N/A
10.6.3.1	General requirements		N/A
10.6.3.2	Dose-based warning and automatic decrease		N/A
10.6.3.3	Exposure-based warning and requirements		N/A
	30 s integrated exposure level (MEL30)..... :		N/A
	Warning for MEL \geq 100 dB(A)..... :		N/A
10.6.4	Measurement methods		N/A
10.6.5	Protection of persons		N/A
	Instructional safeguards..... :		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
10.6.6	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.6.1	Corded listening devices with analogue input		N/A
	Listening device input voltage (mV).....:		N/A
10.6.6.2	Corded listening devices with digital input		N/A
	Max. acoustic output $L_{Aeq,T}$, dB(A).....:		N/A
10.6.6.3	Cordless listening devices		N/A
	Max. acoustic output $L_{Aeq,T}$, dB(A).....:		N/A
			N/A

B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.1	General		P
B.1.5	Temperature measurement conditions	(See appended table B.1.5)	P
B.2	Normal operating conditions		P
B.2.1	General requirements.....:	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers.....:	(See Annex E)	P
B.2.3	Supply voltage and tolerances	+10% and -10% for a.c. mains.	P
B.2.5	Input test.....:	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General	(See appended tables B.3, B.4)	P
B.3.2	Covering of ventilation openings	(See appended table B.3)	P
	Instructional safeguard.....:		N/A
B.3.3	DC mains polarity test		N/A
B.3.4	Setting of voltage selector	No voltage selector	N/A
B.3.5	Maximum load at output terminals	(See appended tables B.3, B.4)	P
B.3.6	Reverse battery polarity		N/A
B.3.7	Audio amplifier abnormal operating conditions	(See Annex E)	P
B.3.8	Safeguards functional during and after abnormal operating conditions.....:	(See appended tables B.3, B.4)	P
B.4	Simulated single fault conditions		P
B.4.1	General		P
B.4.2	Temperature controlling device	No such devices.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
B.4.3	Blocked motor test	No motor used.	N/A
B.4.4	Functional insulation	(See appended tables B.3, B.4)	P
B.4.4.1	Short circuit of clearances for functional insulation		P
B.4.4.2	Short circuit of creepage distances for functional insulation		P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short-circuit and interruption of electrodes in tubes and semiconductors		P
B.4.6	Short circuit or disconnection of passive components		P
B.4.7	Continuous operation of components		N/A
B.4.8	Compliance during and after single fault conditions	(See appended tables B.3, B.4)	P
B.4.9	Battery charging and discharging under single fault conditions	(See Annex M)	N/A
C	UV RADIATION		N/A
C.1	Protection of materials in equipment from UV radiation		N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus..... :		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure test		N/A
C.2.4	Xenon-arc light-exposure test		N/A
D	TEST GENERATORS		P
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		P
D.3	Electronic pulse generator		N/A
E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		P
E.1	Electrical energy source classification for audio signals		P
	Maximum non-clipped output power (W)..... :	8.13	—
	Rated load impedance (Ω)	8	—
	Open-circuit output voltage (V)..... :	7.58	—
	Instructional safeguard..... :	No safeguard necessary	—
E.2	Audio amplifier normal operating conditions		P



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Clause	Requirement + Test	Result - Remark	Verdict
	Audio signal source type..... :	1KHz	—
	Audio output power (W)..... :	5.48	—
	Audio output voltage (V)..... :	6.62	—
	Rated load impedance (Ω)	8Ω*2	—
	Requirements for temperature measurement	(See Table B.1.5)	P
E.3	Audio amplifier abnormal operating conditions	(See Table B.3, B.4)	P
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General		P
	Language	English. Versions in other languages will be provided when national certificate approval.	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1		N/A
F.2.2	Graphic symbols according to IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	The equipment marking is located on the surface and is easily visible.	P
F.3.2	Equipment identification markings	See below.	P
F.3.2.1	Manufacturer identification	See copy of marking plate	P
F.3.2.2	Model identification	See copy of marking plate	P
F.3.3	Equipment rating markings	See below.	P
F.3.3.1	Equipment with direct connection to mains	See copy of marking plate	P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of the supply voltage..... :	See copy of marking plate	P
F.3.3.4	Rated voltage..... :	See copy of marking plate	P
F.3.3.5	Rated frequency..... :	See copy of marking plate	P
F.3.3.6	Rated current or rated power..... :	See copy of marking plate	P
F.3.3.7	Equipment with multiple supply connections	Only one connection.	N/A
F.3.4	Voltage setting device	No voltage setting device.	N/A
F.3.5	Terminals and operating devices	See below.	P
F.3.5.1	Mains appliance outlet and socket-outlet markings		N/A
F.3.5.2	Switch position identification marking..... :	"I" and "O" used for identified on and off.	P



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Clause	Requirement + Test	Result - Remark	Verdict
F.3.5.3	Replacement fuse identification and rating markings :	The Fuse is located within the equipment and not replaceable by an ordinary person or an instructed person. The fuse marking is marked on PCB near fuse: F1 T6.3AL 250VAC	P
	Instructional safeguards for neutral fuse..... :		N/A
F.3.5.4	Replacement battery identification marking..... :		N/A
F.3.5.5	Neutral conductor terminal	Not permanently connected equipment	N/A
F.3.5.6	Terminal marking location		P
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I equipment		P
F.3.6.1.1	Protective earthing conductor terminal..... :		P
F.3.6.1.2	Protective bonding conductor terminals :		P
F.3.6.2	Equipment class marking..... :	See copy of marking plate.	P
F.3.6.3	Functional earthing terminal marking..... :		N/A
F.3.7	Equipment IP rating marking..... :	IPX0	N/A
F.3.8	External power supply output marking..... :	See copy of marking plate	P
F.3.9	Durability, legibility and permanence of marking	All markings required are easily discernible under normal lighting conditions.	P
F.3.10	Test for permanence of markings	After rubbing test by water and petroleum spirit, the marking still legible; it is not easily possible to remove the marking plate and show no curling.	P
F.4	Instructions		P
	a)..... Information prior to installation and initial use		P
	b)..... Equipment for use in locations where children not likely to be present		N/A
	c)..... Instructions for installation and interconnection	Provided in user's manual.	P
	d)..... Equipment intended for use only in restricted access area		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	e)..... Equipment intended to be fastened in place		N/A
	f)..... Instructions for audio equipment terminals		P
	g)..... Protective earthing used as a safeguard		N/A
	h)..... Protective conductor current exceeding ES2 limits		N/A
	i)..... Graphic symbols used on equipment		P
	j)..... Permanently connected equipment not provided with all-pole mains switch		N/A
	k)..... Replaceable components or modules providing safeguard function		N/A
	l)..... Equipment containing insulating liquid		N/A
	m)..... Installation instructions for outdoor equipment		N/A
F.5	Instructional safeguards		P
G	COMPONENTS		P
G.1	Switches		P
G.1.1	General	VDE approved. 10000 operating cycles; normal pollution situation, level 3; and flammability material of plastic material V- 0, UL approved.	P
G.1.2	Ratings, endurance, spacing, maximum load	(See appended table 4.1.2)	P
G.1.3	Test method and compliance		P
G.2	Relays		N/A
G.2.1	Requirements		N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supplying power to other equipment		N/A
G.2.4	Test method and compliance		N/A
G.3	Protective devices		P
G.3.1	Thermal cut-offs		N/A
	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Test method and compliance		N/A
G.3.2	Thermal links		N/A
G.3.2.1	a) Thermal links tested separately according to IEC 60691 with specifics		N/A
	b) Thermal links tested as part of the equipment		N/A
G.3.2.2	Test method and compliance		N/A
G.3.3	PTC thermistors		N/A
G.3.4	Overcurrent protection devices	Certified source used. (See appended table 4.1.2)	P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.4		P
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions..... :	(See appended table B.4)	P
G.4	Connectors		P
G.4.1	Spacings	See below.	P
G.4.2	Mains connector configuration..... :	Approved according to UL 498 appliance inlet was used.	P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely	No mismatching of connectors, plugs or sockets possible.	P
G.5	Wound components		P
G.5.1	Wire insulation in wound components	Approved TIW used for secondary winding of T1	P
G.5.1.2	Protection against mechanical stress	be achieved by providing physical separation in the form of insulating sleeving or sheet material.	P
G.5.2	Endurance test		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Test time (days per cycle)..... :		—
	Test temperature (°C)..... :		—
G.5.2.3	Wound components supplied from the mains		N/A
G.5.2.4	No insulation breakdown		N/A
G.5.3	Transformers		P



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Clause	Requirement + Test	Result - Remark	Verdict
G.5.3.1	Compliance method..... :	The transformers meet the requirements given in G.5.3.2 and G.5.3.3.	P
	Position..... :	See table	P
	Method of protection..... :	Over current protection by circuit design.	P
G.5.3.2	Insulation	Basic / supplementary / double insulation.	P
	Protection from displacement of windings..... :	By insulating tape and bobbin	—
G.5.3.3	Transformer overload tests	(See appended table B.3, B.4)	P
G.5.3.3.1	Test conditions	Tested in the complete equipment.	P
G.5.3.3.2	Winding temperatures	(See appended table B.3, B.4)	P
G.5.3.3.3	Winding temperatures - alternative test method		N/A
G.5.3.4	Transformers using FIW		N/A
G.5.3.4.1	General		N/A
	FIW wire nominal diameter..... :		—
G.5.3.4.2	Transformers with basic insulation only		N/A
G.5.3.4.3	Transformers with double insulation or reinforced insulation..... :		N/A
G.5.3.4.4	Transformers with FIW wound on metal or ferrite core		N/A
G.5.3.4.5	Thermal cycling test and compliance		N/A
G.5.3.4.6	Partial discharge test		N/A
G.5.3.4.7	Routine test		N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements		N/A
G.5.4.2	Motor overload test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4.2	Locked-rotor overload test		N/A
	Test duration (days) :		—
G.5.4.5	Running overload test for DC motors		N/A
G.5.4.5.2	Tested in the unit		N/A
G.5.4.5.3	Alternative method		N/A
G.5.4.6	Locked-rotor overload test for DC motors		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature :		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
G.5.4.6.3	Alternative method		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage		—
G.6	Wire Insulation		P
G.6.1	General	Triple insulated winding in T100, T1F, T401 secondary windings used as reinforced safeguard in the isolating transformer that has separately complied with Annex J. See Appended table 4.1.2. No other wires other than Basic insulated wires not under stress used in the EUT.	P
G.6.2	Enamelled winding wire insulation		N/A
G.7	Mains supply cords		P
G.7.1	General requirements		P
	Type.....	See appendable table 4.1.2 for details.	—
G.7.2	Cross sectional area (mm ² or AWG).....	See appendable table 4.1.2 for details.	P
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords	Appliance inlet used.	N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N).....		N/A
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm).....		N/A
G.7.3.2.4	Strain relief and cord anchorage material		N/A
G.7.4	Cord Entry		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Test method and compliance		N/A
	Overall diameter or minor overall dimension, <i>D</i> (mm).....		—
	Radius of curvature after test (mm).....		—
G.7.6	Supply wiring space		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
G.7.6.1	General requirements		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Requirements		N/A
G.7.6.2.2	Test with 8 mm strand		N/A
G.8	Varistors		N/A
G.8.1	General requirements		N/A
G.8.2	Safeguards against fire		N/A
G.8.2.1	General		N/A
G.8.2.2	Varistor overload test		N/A
G.8.2.3	Temporary overvoltage test		N/A
G.9	Integrated circuit (IC) current limiters		N/A
G.9.1	Requirements		N/A
	IC limiter output current (max. 5A)..... :		—
	Manufacturers' defined drift :		—
G.9.2	Test Program		N/A
G.9.3	Compliance		N/A
G.10	Resistors		N/A
G.10.1	General		N/A
G.10.2	Conditioning		N/A
G.10.3	Resistor test		N/A
G.10.4	Voltage surge test		N/A
G.10.5	Impulse test		N/A
G.10.6	Overload test		N/A
G.11	Capacitors and RC units		P
G.11.1	General requirements	The X-Capacitor and the Y-Capacitor are used as safeguard and complied with IEC/EN 60384-14: 2013 (See appended table 4.1.2).	P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors		P
G.12	Optocouplers		P
	Optocouplers comply with IEC 60747-5-5 with specifics	The optocouplers used in the equipment are complied with IEC/EN 60747-5-5. (see appended table 4.1.2)	P
	Type test voltage $V_{ini, a}$:		—



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Clause	Requirement + Test	Result - Remark	Verdict
	Routine test voltage, $V_{ini, b}$:		—
G.13	Printed boards		P
G.13.1	General requirements		P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation..... :		N/A
	Number of insulation layers (pcs) :		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2	Test method and compliance		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements :	(See Clause G.13)	N/A
G.15	Pressurized liquid filled components		N/A
G.15.1	Requirements		N/A
G.15.2	Test methods and compliance		N/A
G.15.2.1	Hydrostatic pressure test		N/A
G.15.2.2	Creep resistance test		N/A
G.15.2.3	Tubing and fittings compatibility test		N/A
G.15.2.4	Vibration test		N/A
G.15.2.5	Thermal cycling test		N/A
G.15.2.6	Force test		N/A
G.15.3	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		N/A
G.16.1	Condition for fault tested is not required		N/A
	ICX with associated circuitry tested in equipment		N/A
	ICX tested separately		N/A
G.16.2	Tests		N/A
	Smallest capacitance and smallest resistance specified by ICX manufacturer for impulse test..... :		—
	Mains voltage that impulses to be superimposed on :		—
	Largest capacitance and smallest resistance for ICX tested by itself for 10000 cycles test..... :		—



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Clause	Requirement + Test	Result - Remark	Verdict
G.16.3	Capacitor discharge test..... :		N/A
H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N/A
H.1	General		N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringling signal		N/A
H.3.1.1	Frequency (Hz) :		—
H.3.1.2	Voltage (V) :		—
H.3.1.3	Cadence; time (s) and voltage (V) :		—
H.3.1.4	Single fault current (mA):..... :		—
H.3.2	Tripping device and monitoring voltage		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V)..... :		N/A
J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		P
J.1	General		P
	Winding wire insulation..... :	Approved triple insulated wire used. (See appended table 4.1.2)	—
	Solid round winding wire, diameter (mm)..... :		N/A
	Solid square and rectangular (flatwise bending) winding wire, cross-sectional area (mm ²)..... :		N/A
J.2/J.3	Tests and Manufacturing	(See separate test report)	N/A
K	SAFETY INTERLOCKS		N/A
K.1	General requirements		N/A
	Instructional safeguard..... :		N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
K.5.1	Under single fault condition		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Test method and compliance..... :		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements		N/A
	In circuit connected to mains, separation distance for contact gaps (mm)..... :		N/A
	In circuit isolated from mains, separation distance for contact gaps (mm)..... :		N/A
	Electric strength test before and after the test of K.7.2..... :	(See appended table 5.4.9)	N/A
K.7.2	Overload test, Current (A)..... :		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A
L	DISCONNECT DEVICES		P
L.1	General requirements	Plug used for disconnect device	P
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		N/A
L.4	Single-phase equipment	The disconnect device disconnect both poles simultaneously.	P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		P
L.8	Multiple power sources		N/A
	Instructional safeguard..... :		N/A
M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		N/A
M.1	General requirements		N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Batteries and their cells comply with relevant IEC standards..... :		N/A
M.3	Protection circuits for batteries provided within the equipment		N/A
M.3.1	Requirements		N/A
M.3.2	Test method		N/A
	Overcharging of a rechargeable battery		N/A
	Excessive discharging		N/A
	Unintentional charging of a non-rechargeable battery	(See appended table M.3)	P



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Clause	Requirement + Test	Result - Remark	Verdict
	Reverse charging of a rechargeable battery		N/A
M.3.3	Compliance	(See appended table M.3)	N/A
M.4	Additional safeguards for equipment containing a portable secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Requirements		N/A
M.4.2.2	Compliance..... :	(See appended table M.4.2)	N/A
M.4.3	Fire enclosure..... :		N/A
M.4.4	Drop test of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation and procedure for the drop test		N/A
M.4.4.3	Drop, Voltage on reference and dropped batteries (V); voltage difference during 24 h period (%):		N/A
M.4.4.4	Check of the charge/discharge function		N/A
M.4.4.5	Charge / discharge cycle test		N/A
M.4.4.6	Compliance		N/A
M.5	Risk of burn due to short-circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Test method and compliance		N/A
M.6	Safeguards against short-circuits		N/A
M.6.1	External and internal faults		N/A
M.6.2	Compliance		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
	Calculated hydrogen generation rate..... :		N/A
M.7.2	Test method and compliance		N/A
	Minimum air flow rate, Q (m ³ /h)..... :		N/A
M.7.3	Ventilation tests		N/A
M.7.3.1	General		N/A
M.7.3.2	Ventilation test – alternative 1		N/A
	Hydrogen gas concentration (%):..... :		N/A
M.7.3.3	Ventilation test – alternative 2		N/A
	Obtained hydrogen generation rate..... :		N/A
M.7.3.4	Ventilation test – alternative 3		N/A
	Hydrogen gas concentration (%):..... :		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
M.7.4	Marking.....: :		N/A
M.8	Protection against internal ignition from external spark sources of batteries with aqueous electrolyte		N/A
M.8.1	General		N/A
M.8.2	Test method		N/A
M.8.2.1	General		N/A
M.8.2.2	Estimation of hypothetical volume V_z (m ³ /s)..... : :		—
M.8.2.3	Correction factors.....: :		—
M.8.2.4	Calculation of distance d (mm): :		—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse		N/A
	Instructional safeguard.....: :		N/A
N	ELECTROCHEMICAL POTENTIALS		N/A
	Material(s) used.....: :		—
O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		P
	Value of X (mm).....: :	Complied.	—
P	SAFEGUARDS AGAINST CONDUCTIVE OBJECTS		P
P.1	General	No openings.	P
P.2	Safeguards against entry or consequences of entry of a foreign object		P
P.2.1	General		P
P.2.2	Safeguards against entry of a foreign object		P
	Location and Dimensions (mm): :	Top enclosure: 2.5mm x 29.2mm max. Side enclosure: Φ 2.5mm	—
P.2.3	Safeguards against the consequences of entry of a foreign object		N/A
P.2.3.1	Safeguard requirements		N/A
	The ES3 and PS3 keep-out volume in Figure P.3 not applicable to transportable equipment		N/A
	Transportable equipment with metalized plastic parts.....: :		N/A
P.2.3.2	Consequence of entry test.....: :		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Compliance		N/A
P.4	Metallized coatings and adhesives securing parts		N/A
P.4.1	General		N/A
P.4.2	Tests		N/A
	Conditioning, T _c (°C)..... :		—
	Duration (weeks)..... :		—
Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		P
Q.1	Limited power sources		P
Q.1.1	Requirements		P
	a) Inherently limited output	(See appended table Q.1)	P
	b) Impedance limited output		N/A
	c) Regulating network limited output	(See appended table Q.1)	P
	d) Overcurrent protective device limited output		N/A
	e) IC current limiter complying with G.9		N/A
Q.1.2	Test method and compliance..... :	(See appended table Q.1)	P
	Current rating of overcurrent protective device (A) :		N/A
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A) :		N/A
	Current limiting method..... :		—
R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General		N/A
R.2	Test setup		N/A
	Overcurrent protective device for test..... :		—
R.3	Test method		N/A
	Cord/cable used for test..... :		—
R.4	Compliance		N/A
S	TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material..... :		—
	Wall thickness (mm)..... :		—
	Conditioning (°C)..... :		—



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Clause	Requirement + Test	Result - Remark	Verdict
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material..... :		—
	Wall thickness (mm)..... :		—
	Conditioning (°C)..... :		—
S.3	Flammability test for the bottom of a fire enclosure		N/A
S.3.1	Mounting of samples		N/A
S.3.2	Test method and compliance		N/A
	Mounting of samples :		—
	Wall thickness (mm)..... :		—
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power exceeding 4 000 W		N/A
	Samples, material..... :		—
	Wall thickness (mm)..... :		—
	Conditioning (°C)..... :		—
T	MECHANICAL STRENGTH TESTS		P
T.1	General		P
T.2	Steady force test, 10 N :	(See appended table T.2)	P
T.3	Steady force test, 30 N :		N/A
T.4	Steady force test, 100 N :		N/A
T.5	Steady force test, 250 N :	(See appended table T.5)	P
T.6	Enclosure impact test		P
	Fall test	(See appended table T.6)	P
	Swing test		N/A
T.7	Drop test :		N/A
T.8	Stress relief test..... :		N/A
T.9	Glass Impact Test..... :	(See appended table T.9)	P
T.10	Glass fragmentation test		N/A
	Number of particles counted..... :	No such glass provided.	N/A
T.11	Test for telescoping or rod antennas		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Torque value (Nm)	No such antennas provided.	N/A
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
U.1	General		N/A
	Instructional safeguard :		N/A
U.2	Test method and compliance for non-intrinsically protected CRTs		N/A
U.3	Protective screen		N/A
V	DETERMINATION OF ACCESSIBLE PARTS		P
V.1	Accessible parts of equipment		P
V.1.1	General	Following the probes test specified in this annex Figure V.1, V.2, V.5 are suitable.	P
V.1.2	Surfaces and openings tested with jointed test probes		P
V.1.3	Openings tested with straight unjointed test probes		P
V.1.4	Plugs, jacks, connectors tested with blunt probe		P
V.1.5	Slot openings tested with wedge probe		P
V.1.6	Terminals tested with rigid test wire		P
V.2	Accessible part criterion		P
X	ALTERNATIVE METHOD FOR DETERMINING CLEARANCES FOR INSULATION IN CIRCUITS CONNECTED TO AN AC MAINS NOT EXCEEDING 420 V PEAK (300 V RMS)		N/A
	Clearance.....	(See appended table X)	N/A
Y	CONSTRUCTION REQUIREMENTS FOR OUTDOOR ENCLOSURES		N/A
Y.1	General		N/A
Y.2	Resistance to UV radiation		N/A
Y.3	Resistance to corrosion		N/A
Y.3	Resistance to corrosion		N/A
Y.3.1	Metallic parts of outdoor enclosures are resistant to effects of water-borne contaminants by.....		N/A
Y.3.2	Test apparatus		N/A
Y.3.3	Water – saturated sulphur dioxide atmosphere		N/A
Y.3.4	Test procedure.....		N/A
Y.3.5	Compliance		N/A
Y.4	Gaskets		N/A
Y.4.1	General		N/A
Y.4.2	Gasket tests		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
Y.4.3	Tensile strength and elongation tests		N/A
	Alternative test methods..... :		N/A
Y.4.4	Compression test		N/A
Y.4.5	Oil resistance		N/A
Y.4.6	Securing means	(See Annex P.4)	N/A
Y.5	Protection of equipment within an outdoor enclosure		N/A
Y.5.1	General		N/A
Y.5.2	Protection from moisture		N/A
	Relevant tests of IEC 60529 or Y.5.3..... :		N/A
Y.5.3	Water spray test		N/A
Y.5.4	Protection from plants and vermin		N/A
Y.5.5	Protection from excessive dust		N/A
Y.5.5.1	General		N/A
Y.5.5.2	IP5X equipment		N/A
Y.5.5.3	IP6X equipment		N/A
Y.6	Mechanical strength of enclosures		N/A
Y.6.1	General		N/A
Y.6.2	Impact test..... :	(See Table T.6)	N/A



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Clause	Requirement + Test	Result - Remark				Verdict	
5.2	TABLE: Classification of electrical energy sources						P
Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters				ES Class
			U (V)	I (mA)	Type ¹⁾	Additional Info ²⁾	
264Vac	All primary circuits	Normal	--	--	--	--	ES3 (declared)
		Abnormal – See appended table B.3	--	--	--	--	
		Single fault – See appended table B.4	--	--	--	--	
264Vac	5VSB output + to -	Normal	5.13 Vdc	--	SS	DC	ES1
		Abnormal: Overload	5.13 Vdc	--	SS	DC	
		Single fault – D200, SC	0	--	SS	--	
		Single fault: PC100 pin 1-2, SC	0	--	SS	--	
		Single fault: PC100 pin 3-4, SC	0	--	SS	--	
		Single fault: PC100 pin 1, OC	0	--	SS	--	
264Vac	5V output + to -	Normal	5.13 Vdc	--	SS	DC	ES1
		Abnormal: Overload	5.13 Vdc	--	SS	DC	
		Single fault – D200, SC	0	--	SS	--	
		Single fault: PC100 pin 1-2, SC	0	--	SS	--	
		Single fault: PC100 pin 3-4, SC	0	--	SS	--	
		Single fault: PC100 pin 1, OC	0	--	SS	--	
264Vac	Output +/- to earth	Normal	--	0.188mA	SS	60Hz	ES1
		Abnormal: Overload	--	0.188mA	SS	60Hz	



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Clause	Requirement + Test			Result - Remark			Verdict
		Single fault – Neutral open	--	0.196mA	SS	60Hz	
264Vac	Output of secondary USB1	Normal	5.12Vdc	--	SS	DC	ES1
		Abnormal: Overload	5.12Vdc	--	SS	DC	
		Single fault – LED1+ to USB1+	0	--	--	--	
		Single fault – LED2+ to USB1+	0	--	--	--	
Supplementary information:							
1) Type: Steady state (SS), Capacitance (CP), Single pulse (SP), Repetitive pulses (RP), etc.							
2) Additional Info: Frequency, Pulse duration, Pulse off time, Capacitance value, etc.							

5.4.1.8	TABLE: Working voltage measurement				P
Location	RMS voltage (V)	Peak voltage (V)	Frequency (Hz)	Comments	
T2 pin 2-9	309	554	90.80K	--	
T2 pin 2-10	302	546	90.83K	--	
T2 pin 2-12	301	539	89.63K	--	
T2 pin 2-14	298	509	88.66K	--	
T2 pin 6-9	299	523	89.54K	--	
T2 pin 6-10	300	524	88.69K	--	
T2 pin 6-12	301	545	89.65K	--	
T2 pin 6-14	316	560	90.83K	Max. RMS and peak	
T1F pin 1-7	323	513	63.12K	--	
T1F pin 1-8	320	510	62.33K	--	
T1F pin 1-9	320	511	62.89K	--	
T1F pin 1-10	320	511	62.35K	--	
T1F pin 2-7	323	513	62.33K	--	
T1F pin 2-8	318	509	60.99K	--	
T1F pin 2-9	320	511	61.56K	--	
T1F pin 2-10	320	511	62.13K	--	
T1F pin 3-7	323	513	61.30K	--	
T1F pin 3-8	323	519	62.66K	--	
T1F pin 3-9	320	511	62.14K	--	



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Clause	Requirement + Test		Result - Remark	Verdict
T1F pin 3-10	320	511	63.10K	--
T1F pin 4-7	338	534	62.58K	Max. RMS and peak
T1F pin 4-8	322	506	62.35K	--
T1F pin 4-9	320	516	63.10K	--
T1F pin 4-10	320	511	63.02K	--
T1F pin 5-7	338	534	63.00K	--
T1F pin 5-8	322	506	62.58K	--
T1F pin 5-9	320	516	62.35K	--
T1 pin 5-10	342	536	63.12K	Max. RMS and peak
T1 pin 6-7	336	534	63.02K	--
T1 pin 6-8	318	506	62.35K	--
T1 pin 6-9	318	506	62.58K	--
T1 pin 6-10	325	519	62.35K	--
P1 pin 1-3	230	400	60	--
P1 pin 1-4	226	389	60	--
P1 pin 2-3	231	405	60	--
P1 pin 2-4	227	395	60	--
P2 pin 1-3	235	410	60	--
P2 pin 1-4	226	389	60	--
P2 pin 2-3	239	409	60	--
P2 pin 2-4	227	395	60	--
P3 pin 1-3	230	400	60	--
P3 pin 1-4	226	389	60	--
P3 pin 2-3	231	405	60	--
P3 pin 2-4	225	389	60	--
U3 pin 1-3	230	400	60	--
U3 pin 1-4	226	388	60	--
U3 pin 2-3	230	401	60	--
U3 pin 2-4	229	395	60	--
CY3 primary to secondary	336	534	63.02K	--
CY4 primary to secondary	341	569	90.66K	--
Supplementary information: Input: 240 V~, 60 Hz				



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.10.2 TABLE: Vicat softening temperature of thermoplastics			N/A
Method..... :			—
Object/ Part No./Material	Manufacturer/trademark	Thickness (mm)	T softening (°C)
--	--	--	--
Supplementary information: --			

5.4.1.10.3 TABLE: Ball pressure test of thermoplastics				P
Allowed impression diameter (mm)..... :			≤ 2 mm	—
Object/Part No./Material	Manufacturer/trademark	Thickness (mm)	Test temperature (°C)	Impression diameter (mm)
AC connector (CON1)	Land Win Electronic Corp	3.0	125	1.2
AC connector (CON1)	Zhejiang Jieshitai Electronics Co Ltd	3.0	125	1.2
Supplementary information: --				

5.4.2, 5.4.3 TABLE: Minimum Clearances/Creepage distance								P
Clearance (cl) and creepage distance (cr) at/of/between:	U _p (V)	U _{rms} (V)	Freq ¹⁾ (Hz)	Required cl (mm)	cl (mm)	E.S. ²⁾ (V)	Required cr (mm)	cr (mm)
L to N before fuse F1	<420	<250	60	1.5*1.48=2.3	3.4	--	2.5	3.4
Two pins under fuse F1	<420	<250	60	1.5*1.48=2.3	2.9	--	2.4	2.9
Transformer T1 primary winding to secondary pin (RI)	600	363	92.67K	3.0*1.48=4.5	10.3	--	7.4	10.3
Transformer T1 core to secondary pin (RI)	600	363	92.67K	3.0*1.48=4.5	11.9	--	7.4	11.9
Transformer T1F primary winding to secondary pin (RI)	408	250	88.81K	3.0*1.48=4.5	8.0	--	5.0	8.0
Transformer T1F core to secondary pin (RI)	408	250	88.81K	3.0*1.48=4.5	7.4	--	5.0	7.4
PCB under CY3(RI)	<420	<250	60	3.0*1.48=4.5	7.5	--	4.8	7.5
PCB under CY4(RI)	<420	<250	60	3.0*1.48=4.5	7.4	--	4.8	7.4



IEC 62368-1								
Clause	Requirement + Test				Result - Remark			Verdict
PCB under P1(RI)	<420	<250	60	$3.0 \times 1.48 = 4.5$	6.6	--	4.8	6.6
PCB under P2(RI)	<420	<250	60	$3.0 \times 1.48 = 4.5$	6.6	--	4.8	6.6
PCB under P3(RI)	<420	<250	60	$3.0 \times 1.48 = 4.5$	6.6	--	4.8	6.6
PCB under U3(RI)	<420	<250	60	$3.0 \times 1.48 = 4.5$	6.6	--	4.8	6.6
Primary circuit to accessible metal enclosure (RI)	<420	<250	60	$3.0 \times 1.48 = 4.5$	7.4	--	5.0	7.4

Supplementary information:

- 1) Only for frequency above 30 kHz.
- 2) Complete Electric Strength voltage (E.S. (V) when 5.4.2.4 applied).
- 3) FI: Functional insulation; BI: Basic insulation; SI: Supplementary insulation; DI: Double insulation; RI: Reinforced insulation.
- 4) The core of transformer T1F considered as floating part.
- 5) The core of transformer T1, T2, considered as primary part.
- 6) Provide Material Group IIIb.

5.4.4.2	TABLE: Minimum distance through insulation				P
Distance through insulation (DTI) at/of	Peak voltage (V)	Insulation	Required DTI (mm)	Measured DTI (mm)	
Bobbin of T1F	3000Vac	Reinforce	0.4	0.45	
Bobbin of T1	3000Vac	Reinforce	0.4	0.8	
Insulation sheet (Under PCB)	3000Vac	Reinforce	0.4	0.47	
Optocoupler (P1, P2, P3, U3)	3000Vac	Reinforce	0.4	7.6	
Insulation tape	3000Vac	Reinforce	2 layers	2 layers Min.	

Supplementary information:

- 1) See appended table 4.1.2 for details.

5.4.4.9	TABLE: Solid insulation at frequencies >30 kHz						P
Insulation material	E_P	Frequency (kHz)	K_R	Thickness d (mm)	Insulation	V_{PW} (Vpk)	
T1F bobbin	17	88.81	0.80	0.45	Reinforce	408	
T1F insulation tape	17	88.81	0.80	0.16	Reinforce	408	
T1 bobbin	17	92.67	0.76	1.2	Reinforce	600	
T1 insulation tape	17	92.67	0.76	0.16	Reinforce	600	

Supplementary information: --



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:	Voltage shape (Surge, Impulse, AC, DC, etc.)	Test voltage (V)	Breakdown Yes / No	
Functional:				
L to N before fuse	DC	2500	No	
Basic/supplementary:				
L&N to accessible metal enclosure	DC	2500	No	
L&N to accessible LCD display screen	DC	2500	No	
Transformer T1F core to primary winding	DC	2500	No	
Transformer T1F core to secondary winding	DC	2500	No	
Reinforced:				
L&N to accessible terminal	DC	4000	No	
Transformer T1 primary winding to secondary winding	DC	4000	No	
Transformer T1 core to secondary winding	DC	4000	No	
One layers of insulation tape of transformer (All source)	DC	4000	No	
Insulation sheet (Under PCB)	DC	4000	No	
Supplementary information: --				

5.5.2.2	TABLE: Stored discharge on capacitors				P
Location	Supply voltage (V)	Operating and fault condition ¹⁾	Switch position	Measured voltage (Vpk)	ES Class
Phase to Neutral	240Vac, 60Hz	N	On	4Vdc	ES1
Phase to Neutral	240Vac, 60Hz	R1 OC	On	8Vdc	ES1
Supplementary information: X-capacitors installed for testing: CX1=0.47μF; CX2=0.22μF <input checked="" type="checkbox"/> bleeding resistor rating: R1=R2=R3=R4=1.2MΩ <input type="checkbox"/> ICX: 1) Normal operating condition (e.g., normal operation, or open fuse), SC= short circuit, OC= open circuit					

5.6.6	TABLE: Resistance of protective conductors and terminations				P
Location	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)	



IEC 62368-1				
Clause	Requirement + Test	Result - Remark		Verdict
Accessible metal parts and earthing terminal	25	2	0.608	0.019
Supplementary information: --				

5.7.4	TABLE: Unearthed accessible parts					P
Location	Operating and fault conditions	Supply Voltage (V)	Parameters			ES class
			Voltage (V _{rms} or V _{pk})	Current (A _{rms} or A _{pk})	Freq. (Hz)	
Metal enclosure	Normal	264	--	0.13mA	60	ES1
	Abnormal – see table B.3, B.4 for detail	264	--	0.13mA	60	ES1
	Single fault – see table B.3, B.4 for detail	264	--	0.21mA	60	ES1
Accessible terminal	Normal	264	--	0.54mA	60	ES1
	Abnormal – see table B.3, B.4 for detail	264	--	0.54mA	60	ES1
	Single fault – see table B.3, B.4 for detail	264	--	0.58mA	60	ES1
Supplementary information: Abbreviation: SC= short circuit; OC= open circuit						

5.7.5	TABLE: Earthed accessible conductive part			P
Supply voltage (V).....:	240			—
Phase(s)	[X] Single Phase; [] Three Phase: [] Delta [] Wye			—
Power Distribution System	<input checked="" type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT			—
Location	Fault Condition No in IEC 60990 clause 6.2.2	Touch current (mA)	Comment	
Line to earth, Neutral to earthed accessible parts	1	0.18 mApk	Pass	
Supplementary Information: --				

5.8	TABLE: Backfeed safeguard in battery backed up supplies					N/A
Location	Supply voltage (V)	Operating and fault condition	Time (s)	Open-circuit voltage (V)	Touch current (A)	ES Class
--	--	--	--	--	--	--



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

Abbreviation: SC= short circuit, OC= open circuit

6.2.2	TABLE: Power source circuit classifications					P
Location	Operating and fault condition	Voltage (V)	Current (A)	Max. Power ¹⁾ (W)	Time (S)	PS class
output L to N	Normal operation	240	0.87	208.8	5	PS2

Supplementary information:
Abbreviation: SC= short circuit; OC= open circuit
1) Measured after 3 s for PS1 and measured after 5 s for PS2 and PS3.
2) * Unit shutdown immediately recoverable, no hazard.

6.2.3.1	TABLE: Determination of Arcing PIS				P
Location	Open circuit voltage after 3 s (Vpk)	Measured r.m.s current (A)	Calculated value	Arcing PIS? Yes / No	
All primary circuits and components parts	264Vrms	--	--	Yes (declared)	

Supplementary information: --

6.2.3.2	TABLE: Determination of resistive PIS			P
Location	Operating and fault condition	Dissipate power (W)	Resistive PIS? Yes / No	
All primary circuits and components parts	--	--	Yes (declared)	

Supplementary information:
Abbreviation: SC= short circuit; OC= open circuit

8.5.5	TABLE: High pressure lamp				N/A
Lamp manufacturer	Lamp type	Explosion method	Longest axis of glass particle (mm)	Particle found beyond 1 m Yes / No	
--	--	--	--	--	

Supplementary information: --



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

9.6	TABLE: Temperature measurements for wireless power transmitters							N/A
Supply voltage (V).....:								—
Max. transmit power of transmitter (W).....:								—
Foreign objects	w/o receiver and direct contact		with receiver and direct contact		with receiver and at distance of 2 mm		with receiver and at distance of 5 mm	
	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)
--	--	--	--	--	--	--	--	--
Supplementary information: --								

5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements				P
Supply voltage (V):	81V/60Hz		264V/60Hz		—
Ambient temperature during test T_{amb} (°C):	Actual	Shift to 25	Actual	Shift to 25	—
Maximum measured temperature T of part/at:	T (°C)				Allowed T_{max} (°C)
AC connector CON1	53.2	53.4	50.4	51.3	60
Input wire	47.6	47.8	48.8	49.7	80
RT1	58.8	59.0	33.4	34.3	85
Y-Capacitor CY1	72.1	72.3	33.3	34.2	125
X-Capacitor CX1	70.3	70.5	35.4	36.3	110
Inductor L2 winding	92.6	92.8	36.9	37.8	130
X-Capacitor C2	83.7	83.9	37.1	38.0	110
Inductor L3 winding	95.6	95.8	37.8	38.7	130
L6 winding	89.8	90.0	42.5	43.4	130
L6 core	86.4	86.6	41.5	42.4	--
PCB near DP1	93.6	93.8	45.4	46.3	130
PCB near Q1	98.5	98.7	46.8	47.7	130
PCB near Q2	95.7	95.9	47.0	47.9	130
Capacitor EC1	74.1	74.3	38.6	39.5	105
PCB near Q6A	97.3	97.5	47.5	48.4	130
Capacitor EC3	71.6	71.8	41.5	42.4	105
PCB near Q4	72.2	72.4	49.2	50.1	130
PCB near D3	77.9	78.1	49.6	50.5	130
PCB near D9	80.4	80.6	50.0	50.9	130



IEC 62368-1							
Clause	Requirement + Test			Result - Remark			Verdict
Transformer T1F winding	54.0	54.2	53.2	54.1	110		
Transformer T1F core	52.2	52.4	51.5	52.4	--		
Transformer T1 winding	82.6	82.8	84.9	85.8	110		
Transformer T1 core	77.3	77.5	81.1	82.0	--		
Y-Capacitor CY4	64.8	65.0	66.3	67.2	125		
Optocoupler P1	74.3	74.5	78.3	79.2	110		
Optocoupler P1	51.6	51.8	50.5	51.4	110		
Metal Enclosure inside near T1F	35.8	36.0	36.3	37.2	--		
Metal Enclosure outside near T1F	36.4	36.6	36.1	37.0	70		
Button body	32.4	32.6	31.8	32.7	77		
LCD display screen	36.6	36.8	36.5	37.4	56		
Ambient	24.8	25.0	24.1	25.0	--		
Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
--	--	--	--	--	--	--	--
Supplementary information: Tested with HDMI mode.							

B.2.5		TABLE: Input test							P
U (V)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status	
81	50	--	--	44.2	--	F1	--	1/8 Max. Non-clipped output power with 1KHz sine wave signal input, display adjusted to maximum power consumption.	
81	60	--	--	44.1	--	F1	--		
90	50	--	--	45.5	50	F1	--		
90	60	--	--	45.6	50	F1	--		
240	50	--	--	43.4	50	F1	--		
240	60	--	--	43.3	50	F1	--		
264	50	--	--	42.3	--	F1	--		
264	60	--	--	42.2	--	F1	--		
Supplementary information: --									



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.3, B.4		TABLE: Abnormal operating and fault condition tests					P
Ambient temperature T _{amb} (°C)..... :		25°C if not specified					—
Power source for EUT: Manufacturer, model/type, outputrating... :		--					—
Component No.	Condition	Supply voltage (V)	Test time	Fuse no.	Fuse current (A)	Observation	
Ventilation Openings	Blocked	264Vac	2hrs	F1	1.048	EUT normal working. After testing, no damaged, no hazards. T2 winding: 59.9°C T2 core: 58.8°C T1F winding: 56.3°C T1F core: 54.4°C T1 winding: 91.5°C T1 core: 87.3°C Ambient: 24.5°C	
Speaker	Maximum attainable output power	264Vac	1hr 55mins	F1	1.164	EUT normal working. After testing, no damaged, no hazards. T2 winding: 58.0°C T2 core: 56.6°C T1F winding: 54.6°C T1F core: 52.5°C T1 winding: 88.0°C T1 core: 83.3°C Ambient: 24.8°C	
Speaker	SC	264Vac	2hrs	F1	0.987	EUT normal working and the speaker output shutdown. After testing, no damaged, no hazards. T2 winding: 58.4°C T2 core: 57.3°C T1F winding: 55.0°C T1F core: 53.2°C T1 winding: 88.7°C T1 core: 84.6°C Ambient: 24.8°C	



IEC 62368-1						
Clause	Requirement + Test			Result - Remark		Verdict
C2	SC	264	1S	F1	0	F1 opened immediately, no hazard. Output voltage:0V Touch current:0.304mA peak
R2	SC	264	1S	F1	0	F1 opened immediately, no hazard. Output voltage:0V Touch current:0.304mA peak
U1 pin 6-1	SC	264	1S	F1	0	F1 opened immediately, no hazard. Output voltage:0V Touch current:0.304mA peak
U1 pin 6-2	SC	264	10mins	F1	0.055	Unit shutdown immediately and recoverable, no damaged, no hazard. Output voltage:0V Touch current:0.204mA peak
U2 pin 1-2	SC	264	10mins	F1	0.055	Unit shutdown immediately and recoverable, no damaged, no hazard. Output voltage:0V Touch current:0.204mA peak
U2 pin 3-4	SC	264	10mins	F1	0.055	Unit shutdown immediately and recoverable, no damaged, no hazard. Output voltage:0V Touch current:0.204mA peak
U2 pin 1	OC	264	10mins	F1	0.055	Unit shutdown immediately and recoverable, no damaged, no hazard. Output voltage:0V Touch current:0.204mA peak
U2 pin 3	OC	264	10mins	F1	0.055	Unit shutdown immediately and recoverable, no damaged, no hazard. Output voltage:0V Touch current:0.204mA peak
D4F	SC	264	10mins	F1	0.606	Unit shutdown immediately and recoverable, no damaged, no hazard. Output voltage:0V Touch current:0.204mA peak



IEC 62368-1						
Clause	Requirement + Test				Result - Remark	Verdict
D6F	SC	264	10mins	F1	0.606	Unit shutdown immediately and recoverable, no damaged, no hazard. Output voltage:0V Touch current:0.204mA peak
Supplementary information: --						



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

M.3	TABLE: Protection circuits for batteries provided within the equipment						N/A
Is it possible to install the battery in a reverse polarity position?.....:		No				—	
Equipment Specification	Charging						
	Voltage (V)			Current (A)			
	--			--			
Manufacturer/type	Battery specification						
	Non-rechargeable batteries			Rechargeable batteries			
	Discharging current (mA)	Unintentional charging current (A)	Charging		Discharging current (A)	Reverse charging current (A)	
			Voltage (V)	Current (A)			
--	--	--	--	--	--	--	
--	--	--	--	--	--	--	
--	--	--	--	--	--	--	
Note: The tests of M.3.2 are applicable only when above appropriate data is not available.							
Specified battery temperature (°C).....:		--				—	
Component No.	Fault condition	Charge/discharge mode	Test time	Temp. (°C)	Current (A)	Voltage (V)	Observation
--	--	--	--	--	--	--	--
Supplementary information: Abbreviation: SC= short circuit; OC= open circuit; NL= no chemical leakage; NS= no spillage of liquid; NE= no explosion; NF= no emission of flame or expulsion of molten metal.							

M.4.2	TABLE: Charging safeguards for equipment containing a secondary lithium battery					N/A
Maximum specified charging voltage (V).....:		--				—
Maximum specified charging current (A)		--				—
Highest specified charging temperature (°C)		--				—
Lowest specified charging temperature (°C)		--				—
Battery manufacturer/type	Operating and fault condition	Measurement			Observation	
		Charging voltage (V)	Charging current (A)	Temp. (°C)		
--	--	--	--	--	--	--
Supplementary information: Abbreviation: SC= short circuit; OC= open circuit; MSCV= maximum specified charging voltage; MSCC= maximum specified charging current; HSCT= highest specified charging temperature; LSCT= lowest specified charging temperature.						



IEC 62368-1							
Clause	Requirement + Test			Result - Remark			Verdict
Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)						P
Output Circuit	Condition	U _{oc} (V)	Time (s)	I _{sc} (A)		S (VA)	
				Meas.	Limit	Meas.	Limit
HDMI 1 terminal	Normal	5.02	5	0.04	8	0.2	100
	RH122 SC	0	3	0	8	0	100
VGA terminal	Normal	0	3	0	8	0	100
	R177 SC	0	3	0	8	0	100
Supplementary Information: --							

T.2, T.3, T.4, T.5	TABLE: Steady force test						P
Part/Location	Material	Thickness (mm)	Probe	Force (N)	Test Duration (s)	Observation	
Internal components / parts	--	--	V.2	10	5	No damaged	
LCD panel	Glass	2.2 Min.	--	250	5	No damaged	
Top enclosure(T5)	Metal	1.6 Min.	--	250	5	No damaged	
Side enclosure(T5)	Metal	1.6 Min.	--	250	5	No damaged	
Supplementary information: --							

T.6, T.9	TABLE: Impact test				P
Location/part	Material	Thickness (mm)	Height (mm)	Observation	
Top enclosure	Metal	1.6 Min.	1300	No damaged	
Side enclosure	Metal	1.6 Min.	1300	No damaged	
Bottom enclosure	Metal	1.6 Min.	1300	No damaged	
LCD panel	Glass	2.2 Min.	408	No damaged	
Supplementary information: --					



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

T.7	TABLE: Drop test				N/A
Location/part	Material	Thickness (mm)	Height (mm)	Observation	
--	--	--	--	--	
Supplementary information: --					

T.8	TABLE: Stress relief test				N/A
Location/Part	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation
--	--	--	--	--	--
Supplementary information: --					

X	TABLE: Alternative method for determining minimum clearances distances			N/A
Clearance distanced between:	Peak of working voltage (V)	Required cl (mm)	Measured cl (mm)	
--	--	--	--	
Supplementary information: --				



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.1.2	TABLE: Critical components information					P
Object / part No.	Manufacturer / trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Plug	Dongguan Narken Industrial Investment Co., Ltd	XD-006-E	AC 250 V, 13 A	BS 1363-1	TUV Rheinland R 50195409	
Power cord	Dongguan Nan Ke Investment Co., LTD	H05VV-F	450/750 V, 3 x 0.75 mm ²	IEC 60227-5 EN 50525-2-11	VDE 40043002	
Connector	Dongguan Nan Ke Investment Co., LTD	XTH-021	AC 250 V, 10 A	IEC/ EN 60320-1	VDE 40049783	
AC inlet	Yueqing Yanhui Electronic Co., Ltd.	DB-14	AC 250 V, 10 A	IEC/ EN 60320-1	VDE 40032008	
Switch for appliances	LECI Electronics Co., Ltd	RS601D Serie(s)	AC 250V, 6(4)A, 1E4, T85	IEC/ EN 61058-1 IEC/ EN 61058-1-1	VDE 40017430	
Metal enclosure	Interchangeable	Interchangeable	Metal, Min. thickness 1.6 mm	IEC/EN 62368-1	Tested with appliance	
AC connector (CON1)	Land Win Electronic Corp	3962P	7 A, 250 Vac	UL 1977 UL 94 IEC/ EN 61984	UL E159426 TUV R 50061331	
(Alternative)	Zhejiang Jieshitai Electronics Co Ltd	A3962-05AW (for UL) A3962 AW-05 (for VDE)	7 A, 250 Vac	UL 1977 UL 94 IEC/ EN 61984	UL E314369 VDE 40025278	
Thermistor (TR1, TR2) (Optional)	Interchangeable	Interchangeable	Min. 8 A, Max. 5 Ω at 25 °C	IEC 62368-1	Tested with appliance	
PCB	Chian You Co Ltd	06V0	V-0, 130 °C	UL 796 UL 94	UL E112804	
(Alternative)	Interchangeable	Interchangeable	V-0, 130 °C	UL 94, UL 796	UL	
Fuse (F1)	Honghu Bluelight Electronic Co., Ltd.	6ET	T 5 AL, 250 VAC	IEC/EN 60127-1; IEC/EN 60127-3	VDE 40034107	



IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
Varistor	Thinking Electronic Industrial Co., Ltd.	TVR10681, TVR10561, TVR10471, TVR10681-V, TVR10561-V, TVR10471-V, TVR14681, TVR14561, TVR14471, TVR14681-V, TVR14561-V, TVR14471-V	Min. 300 Vac, 85 °C, coating V-1 or better	IEC 61051-1, IEC 61051-2, IEC 61051-2-2	VDE 005944
Choke (L6)	Dongguan Aoyuan Electronics Technology Co., Ltd	8LE00308	130 °C, 250 µH+7%, - 9%	IEC/EN 62368-1	Tested with appliance
- Bobbin	Sumitomo Bakelite Co Ltd	PM-9820	Phenolic, V-0, 150 °C, min. thickness: 0.45 mm.	UL 94	UL E41429
- Magnet wire	Interchangeable	Interchangeable	Min. 130 °C	UL 1446	UL
- Insulating Tape	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	CT* (c)(g) CT* (b) (g) PZ*(b) CT-280B	130 °C	UL510	UL E165111
Choke (L2, L3)	Dongguan Aoyuan Electronics Technology Co., Ltd	8LT00004	130 °C, 12 mH min.	IEC/EN 62368-1	Tested with appliance
- Bobbin	Chang Chun Plastics Co Ltd	T375HF	Phenolic, V-0, 150 °C, min. thickness: 0.45 mm.	UL 94	UL E59481
- Magnet wire	Interchangeable	Interchangeable	Min. 130 °C	UL 1446	UL
Opto-coupler	Everlight Electronics Co., Ltd.	EL817 (blank; V)	Reinforced Insulation, Ext. Cr./Cl. ≥ 7.6 mm, Dti. ≥ 0.4 mm, 110 °C	IEC/EN 60747-5- 5	VDE 132249
X-capacitor (CX1)	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	Max. 0.47 µF, min. 250 Vac, 110 °C, X2 type	IEC/EN 60384-14	VDE 40024534



IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
(Alternative)	Dongguan Easy-gather Electronic Co., Ltd.	MKP-X2	Max. 0.47 μ F, min. 300 Vac, 110 °C, X2 type	IEC/EN 60384-14	VDE 40022258
(Alternative)	Europtronic (SuZhou) Co. Ltd.	MPX2	Max. 0.47 μ F, min. 275 Vac, 110 °C, X2 type	IEC/EN 60384-14	VDE 40025981
(Alternative)	STRONG Components Co. LTD	MPX	Max. 0.47 μ F, min. 250 Vac, 110 °C, X2 type	IEC/EN 60384-14	VDE 40005451
(Alternative)	Anhui Feida Electrical Technology Co., Ltd.	MKP	Max. 0.47 μ F, min. 250 Vac, 110 °C, X2 type	IEC/EN 60384-14	VDE 40045744
(Alternative)	South China Electronic Co., Ltd.	MPX Series	Max. 0.47 μ F, min. 250 Vac, 110 °C, X2 type	IEC/EN 60384-14	VDE 40050285
X-capacitor (CX2)	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	Max. 0.22 μ F, min. 250 Vac, 110 °C, X2 type	IEC/EN 60384-14	VDE 40024534
(Alternative)	Dongguan Easy-gather Electronic Co., Ltd.	MKP-X2	Max. 0.22 μ F, min. 300 Vac, 110 °C, X2 type	IEC/EN 60384-14	VDE 40022258
(Alternative)	Europtronic (SuZhou) Co. Ltd.	MPX2	Max. 0.22 μ F, min. 275 Vac, 110 °C, X2 type	IEC/EN 60384-14	VDE 40025981
(Alternative)	STRONG Components Co. LTD	MPX	Max. 0.22 μ F, min. 250 Vac, 110 °C, X2 type	IEC/EN 60384-14	VDE 40005451
(Alternative)	Anhui Feida Electrical Technology Co., Ltd.	MKP	Max. 0.22 μ F, min. 250 Vac, 110 °C, X2 type	IEC/EN 60384-14	VDE 40045744
(Alternative)	South China Electronic Co., Ltd.	MPX Series	Max. 0.22 μ F, min. 250 Vac, 110 °C, X2 type	IEC/EN 60384-14	VDE 40050285
Bleeder resistor (R1, R2, R3, R4)	Interchangeable	Interchangeable	Each Max. 1.2 M Ω , 1/4 W	IEC/EN 62368-1	Tested with appliance
Y-Capacitor (CY1, CY2, CY3)	Guangdong South Hongming Electronic Science and Technology Co., Ltd.	F	CY1=CY2=CY3: max. 470 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40036393



IEC 62368-1					
Clause	Requirement + Test			Result - Remark	Verdict
(Alternative)	Success Electronics Co., Ltd.	SB	CY1=CY2=CY3: max. 470 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40020001 VDE 40037221
(Alternative)	Success Electronics Co., Ltd.	SE	CY1=CY2=CY3: max. 470 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40037211 VDE 40020002
(Alternative)	TDK Corporation	CD (miniature series)	CY1=CY2=CY3: max. 470 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40017931
(Alternative)	Murata Mfg. Co., Ltd.	KX	CY1=CY2=CY3: max. 470 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40002831
(Alternative)	Walsin Technology Corp.	AH	CY1=CY2=CY3: max. 470 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40001804
(Alternative)	Hsuan Tai Electronic Co. Ltd.	CY	CY1=CY2=CY3: max. 470 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40008912
(Alternative)	South China Electronic Co., Ltd.	CY	CY1=CY2=CY3: max. 470pF, min. 250Vac, 125°C, Y1 type	IEC/EN 60384-14	VDE 40045823
Y-Capacitor (CY6) (Optional)	Guangdong South Hongming Electronic Science and Technology Co., Ltd.	F	Max. 100 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40036393
(Alternative)	Success Electronics Co., Ltd.	SB	Max. 100 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40020001 VDE 40037221
(Alternative)	Success Electronics Co., Ltd.	SE	Max. 100 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40037211 VDE 40020002



IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
(Alternative)	Success Electronics Co., Ltd.	SL	Max. 100 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40019465 VDE 40039623
(Alternative)	TDK Corporation	CD (miniature series)	Max. 100 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40017931
(Alternative)	Murata Mfg. Co., Ltd.	KX	Max. 100 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40002831
(Alternative)	Walsin Technology Corp.	AH	Max. 100 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40001804
(Alternative)	Hsuan Tai Electronic Co. Ltd.	CY	Max. 100 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40008912
(Alternative)	South China Electronic Co., Ltd.	CY	Max. 100 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40045823
Y-Capacitor (CY4)	Guangdong South Hongming Electronic Science and Technology Co., Ltd.	F	Max. 1000 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40036393
(Alternative)	Success Electronics Co., Ltd.	SB	Max. 1000 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40020001 VDE 40037221
(Alternative)	Success Electronics Co., Ltd.	SE	Max. 1000 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40037211 VDE 40020002
(Alternative)	TDK Corporation	CD (miniature series)	Max. 1000 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40017931
(Alternative)	Murata Mfg. Co., Ltd.	KX	Max. 1000 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40002831



IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
(Alternative)	Walsin Technology Corp.	AH	Max. 1000 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40001804
(Alternative)	Hsuan Tai Electronic Co. Ltd.	CY	Max. 1000 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40008912
(Alternative)	South China Electronic Co., Ltd.	CY	Max. 1000 pF, min. 250 Vac, 125 °C, Y1 type	IEC/EN 60384-14	VDE 40045823
Bridge rectifier (BD1)	Interchangeable	Interchangeable	Min. 10 A, min. 600 V	IEC/EN 62368-1	Tested with appliance
Transformer (T1)	Dongguan Aoyuan Electronics Technology Co., Ltd	EQ25-1073	Class B	IEC 62368-1	Tested with appliance
- Magnet wire as primary part	Interchangeable	MW 75-C	Min. 130 °C	UL 1446	UL
- Bobbin	Sumitomo Bakelite Co Ltd	PM-9820, PM-9630	Phenolic, V-0, 150 °C, min. thickness: 0.45 mm.	UL 94	UL E41429
- Tube	Great Holding Industrial Co Ltd	TFT	200 °C	UL 224	UL E156256
(Alternative)	Shenzhen Woer Heat-Shrinkable Material Co Ltd	WF	200 °C	UL 224	UL E203950
(Alternative)	Changyuan Electronics Group Co Ltd	CB-TT-S, CB-TT-T	200 °C	UL 224	UL E180908
(Alternative)	Dongguan City Changjie Metals & Plastic Products Co Ltd	CJ-TT-T	200 °C	UL 224	UL E338209



IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
(Alternative)	Interchangeable	Interchangeable	Min. 130 °C	UL 224	UL
- Triple insulated wire	Ta Ya Electric Wire & Cable Co Ltd	TILW-B	130 °C	IEC/EN 62368-1 UL 60950-1 UL 2353	UL E225803 VDE 40019957
(Alternative)	Dah Jin Technology Co Ltd	TLW-B	Min. 130 °C	IEC/EN 62368-1 UL 60950-1 UL 2353	UL E236542 VDE 40008834
- Insulating Tape	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	CT* (b)(g), PZ*(b), CT* (c)(g), CT- 280B	130 °C	UL 510	UL E165111
(Alternative)	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	PF* (d) (g)	180 °C	UL 510	UL E165111
(Alternative)	Jingjiang Jingyi Adhesive Product Co Ltd	JY25-A (b)	130 °C	UL 510	UL E246950
- Varnish	Elantas Pdg, Inc.	468-2 (d), 468-2FC (d), 468-2-7-xxF (d), 468-2-7FC-xxF(d)	Min. 130 °C	UL 1446	UL E75225
(Alternative)	Interchangeable	Interchangeable	Min. 130 °C	UL 1446	UL
Transformer (T1F)	Dongguan Aoyuan Electronics Technology Co., Ltd	EQ40-1105	Class B	IEC 62368-1	Tested with appliance
- Magnet wire as primary part	Interchangeable	MW 75-C	Min. 130 °C	UL 1446	UL
- Bobbin	Sumitomo Bakelite Co Ltd	PM-9820, PM- 9630	Phenolic, V-0, 150 °C, min. thickness: 0.45 mm.	UL 94	UL E41429



IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
(Alternative)	Chang Chun Plastics Co Ltd	T375J	Phenolic, V-0, 150°C. min. thickness: 0.45mm.	UL 94	UL E59481
-Insulating Tape	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	CT* (b) (g) PZ*(b) CT* (c) (g) CT-280B	130 °C	UL 510	UL E165111
(Alternative)	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	PF* (d) (g)	180 °C	UL 510	UL E165111
(Alternative)	Jingjiang Jingyi Adhesive Product Co Ltd	JY25-A(b)	130 °C	UL 510	ULE246950
- Tube	Great Holding Industrial Co Ltd	TFT	200 °C	UL 224	UL E156256
(Alternative)	Shenzhen Woer Heat-Shrinkable Material Co Ltd	WF	200 °C	UL 224	ULE203950
(Alternative)	Changyuan Electronics Group Co Ltd	CB-TT-S, CB-TT-T	200 °C	UL 224	ULE180908
(Alternative)	Dongguan City Changjie Metals & Plastic Products Co Ltd	CJ-TT-T	200 °C	UL 224	ULE338209
(Alternative)	Interchangeable	Interchangeable	Min. 130 °C	UL 224	UL
- Triple insulated wire	Ta Ya Electric Wire & Cable Co Ltd	TILW-B	130 °C	IEC/EN 62368-1 UL 60950-1 UL 2353	UL E225803 VDE 40019957
(Alternative)	Dah Jin Technology Co Ltd	TLW-B, TLW-F	Min. 130 °C	IEC/EN 62368-1 UL 60950-1 UL 2353	UL E236542 VDE 40008834



IEC 62368-1					
Clause	Requirement + Test			Result - Remark	Verdict
- Varnish	Elantas Pdg, Inc.	468-2 (d), 468-2FC (d), 468-2-7-xxF (d), 468-2-7FC-xxF(d)	Min. 130 °C	UL 1446	UL E75225
(Alternative)	Interchangeable	Interchangeable	Min. 130 °C	UL 1446	UL
Insulation sheet under PCB (Optional)	Sichuan Dongfang Insulating Material Co Ltd	DFR3738A(d), DFR3638A(d)	V-0, 110 °C, min. thickness: 0.40 mm	UL 94	UL E199019
(Alternative)	Sabic Innovative Plastics US L L C	FR700(GG)	VTM-0, 125 °C, min. thickness: 0.40 mm	UL 94	UL E121562
(Alternative)	Sabic Japan L L C	FR700	V-0, 125 °C, min. thickness: 0.40 mm	UL 94	UL E207780
(Alternative)	Shenzhen Teesun Technology Co Ltd	TS-FR1370F	VTM-0, 125 °C, min. thickness: 0.40 mm	UL 94	UL E329660
(Alternative)	Itw Electronics Components/ Products (Shanghai) Co Ltd	FORMEX GK-(a)(d)(f1) FORMEX GK-(a)(d)(f2)	VTM-0, 115 °C, min. Thickness: 0.45 mm	UL 94	UL E256266
Internal wire	Interchangeable	Interchangeable	VW-1, 80 °C	UL 758	UL
LCD panel	Guangzhou Lindian Intelligent Technology Co., Ltd.	LD650L	43 inch,	IEC 62368-1	Tested with apparatus
Speaker	Interchangeable	Interchangeable	2 pcs, 8 Ω, 15 W	IEC 62368-1	Tested with appliance
RTC battery	Interchangeable	CR2032	Max. abnormal charging current: 10mA	UL 1642	UL



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Clause	Requirement + Test		Result - Remark		Verdict
(Alternative)	Interchangeable	CR2032	Max. abnormal charging current: 10mA	IEC 60086-4	VDE or other EU cert
Wall mounting bracket	Guangzhou Dipei Metal Products Co., LTD	860*200*20mm	SPCC, Max. Load: 200Kg	IEC 62368-1	Tested with appliance
Supplementary information: 1) Provided evidence ensures the agreed level of compliance. See OD-2039. 2) Description line content is optional. Main line description needs to clearly detail the component used for testing.					



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 62368-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment - Part 1: Safety requirements)			
Differences according to: EN IEC 62368-1:2020			
Attachment Form No.: EU_GD_IEC62368_1E			
Attachment Originator: UL(Demko)			
Master Attachment: 2021-02-04			
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	CENELEC COMMON MODIFICATIONS (EN)		—
	Clause numbers in the cells that are shaded light grey are clause references in EN IEC 62368-1:2020. All other clause numbers in that column, except for those in the paragraph below, refers to IEC 62368-1:2018. Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2018 are prefixed "Z".		—
	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations Annex ZD (informative) IEC and CENELEC code designations for flexible cords		—
1	Modification to Clause 3.		—
3.3.19	Sound exposure <i>Replace 3.3.19 of IEC 62368-1 with the following definitions:</i>		N/A
3.3.19.1	momentary exposure level, MEL metric for estimating 1 s sound exposure level from the HD 483-1 S2 test signal applied to both channels, based on EN 50332-1:2013, 4.2. Note 1 to entry: MEL is measured as A-weighted levels in dB. Note 2 to entry: See B.3 of EN 50332-3:2017 for additional information.		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.19.3	<p>sound exposure, E</p> <p>A-weighted sound pressure (p) squared and integrated over a stated period of time, T</p> <p>Note 1 to entry: The SI unit is Pa² s.</p> $E = \int_0^T p(t)^2 dt$		N/A
3.3.19.4	<p>sound exposure level, SEL</p> <p>logarithmic measure of sound exposure relative to a reference value, E_0, typically the 1 kHz threshold of hearing in humans.</p> <p>Note 1 to entry: SEL is measured as A-weighted levels in dB.</p> $SEL = 10 \lg \left(\frac{E}{E_0} \right) \text{ dB}$ <p>Note 2 to entry: See B.4 of EN 50332-3:2017 for additional information.</p>		N/A
3.3.19.5	<p>digital signal level relative to full scale, dBFS</p> <p>levels reported in dBFS are always r.m.s. Full scale level, 0 dBFS, is the level of a dc-free 997-Hz sine wave whose undithered positive peak value is positive digital full scale, leaving the code corresponding to negative digital full scale unused</p> <p>Note 1 to entry: It is invalid to use dBFS for non-r.m.s. levels. Because the definition of full scale is based on a sine wave, the level of signals with a crest factor lower than that of a sine wave may exceed 0 dBFS. In particular, square wave signals may reach +3,01 dBFS.</p>		N/A
2	Modification to Clause 10		—
10.6	<p>Safeguards against acoustic energy sources</p> <p>Replace 10.6 of IEC 62368-1 with the following:</p>		N/A
10.6.1.1	<p>Introduction</p> <p>Safeguard requirements for protection against long-term exposure to excessive sound pressure levels from personal music players closely coupled to the ear are specified below. Requirements for earphones and headphones intended for use with personal music players are also covered. A personal music player is a portable equipment intended for use by an ordinary person, that:</p> <ul style="list-style-type: none"> – is designed to allow the user to listen to audio or audiovisual content / material; and 		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>– uses a listening device, such as headphones or earphones that can be worn in or on or around the ears; and</p> <p>– has a player that can be body worn (of a size suitable to be carried in a clothing pocket) and is intended for the user to walk around with while in continuous use (for example, on a street, in a subway, at an airport, etc.).</p> <p>EXAMPLES Portable CD players, MP3 audio players, mobile phones with MP3 type features, PDAs or similar equipment.</p> <p>Personal music players shall comply with the requirements of either 10.6.2 or 10.6.3.</p> <p>NOTE 1 Protection against acoustic energy sources from telecom applications is referenced to ITU-T P.360.</p> <p>NOTE 2 It is the intention of the Committee to allow the alternative methods for now, but to only use the dose measurement method as given in 10.6.5 in future. Therefore, manufacturers are encouraged to implement 10.6.0.5 As soon as possible.</p> <p>Listening devices sold separately shall comply with the requirements of 10.6.6. These requirements are valid for music or video mode only. The requirements do not apply to:</p> <ul style="list-style-type: none"> – professional equipment; <p>NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.</p> <ul style="list-style-type: none"> – hearing aid equipment and other devices for assistive listening; – the following type of analogue personal music players: <ul style="list-style-type: none"> • long distance radio receiver (for example, a multiband radio receiver or world band radio receiver, an AM radio receiver), and • cassette player/recorder; <p>NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies.</p> <ul style="list-style-type: none"> – a player while connected to an external amplifier that does not allow the user to walk around while in use. <p>For equipment that is clearly designed or intended primarily for use by children, the limits of the relevant toy standards may apply.</p> <p>The relevant requirements are given in</p>		



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.		
10.6.1.2	<p>Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz</p> <p>The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz).</p> <p>For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body mounted devices, attention is drawn to EN 50360 and EN 50566.</p>		N/A
10.6.2	Classification of devices without the capacity to estimate sound dose		N/A
10.6.2.1	<p>General</p> <p>This standard is transitioning from short-term based (30 s) requirements to long-term based (40 hour) requirements. These clauses remain in effect only for devices that do not comply with sound dose estimation as stipulated in EN 50332-3.</p> <p>For classifying the acoustic output $L_{Aeq,T}$, measurements are based on the A-weighted equivalent sound pressure level over a 30 s period.</p> <p>For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, measurements may be done over the duration of the complete song. In this case, T becomes the duration of the song.</p> <p>NOTE Classical music, acoustic music and broadcast typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the content and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song does not exceed the required limit. For example, if the player is set with the programme simulation noise to 85 dB, but the average music level of the song is only 65 dB, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dB.</p>		N/A
10.6.2.2	<p>RS1 limits (to be superseded, see 10.6.3.2)</p> <p>RS1 is a class 1 acoustic energy source that does not exceed the following:</p> <ul style="list-style-type: none"> – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening 		N/A





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Clause	Requirement + Test	Result - Remark	Verdict
	<p>device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the $L_{Aeq,T}$ acoustic output shall be ≤ 85 dB when playing the fixed "programme simulation noise" described in EN 50332-1.</p> <p>– for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 27 mV (analogue interface) or -25 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.</p> <p>– The RS1 limits will be updated for all devices as per 10.6.3.2.</p>		
10.6.2.3	<p>RS2 limits (to be superseded, see 10.6.3.3)</p> <p>RS2 is a class 2 acoustic energy source that does not exceed the following:</p> <p>– for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or when the combination of player and listening device is known by other means such as setting or automatic 130 detection, the $L_{Aeq,T}$ acoustic output shall be ≤ 100 dB(A) when playing the fixed "programme simulation noise" as described in EN 50332-1.</p> <p>– for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 150 mV (analogue interface) or -10 dBFS (digital interface) when playing the fixed "programme simulation noise" as described in EN 50332-1.</p>		N/A
10.6.2.4	<p>RS3 limits</p> <p>RS3 is a class 3 acoustic energy source that exceeds RS2 limits.</p>		N/A
10.6.3	Classification of devices (new)		N/A
10.6.3.1	<p>General</p> <p>Previous limits (10.6.2) created abundant false negative and false positive PMP sound level warnings. New limits, compliant with The Commission Decision of 23 June 2009, are given below.</p>		N/A
10.6.3.2	<p>RS1 limits (new)</p> <p>RS1 is a class 1 acoustic energy source that does not exceed the following:</p> <p>– for equipment provided as a package (player</p>		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the $L_{Aeq,T}$ acoustic output shall be ≤ 80 dB when playing the fixed "programme simulation noise" described in EN 50332-1.</p> <p>– for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 15 mV (analogue interface) or -30 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.</p>		
10.6.3.3	<p>RS2 limits (new)</p> <p>RS2 is a class 2 acoustic energy source that does not exceed the following:</p> <p>– for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the weekly sound exposure level, as described in EN 50332-3, shall be ≤ 80 dB when playing the fixed "programme simulation noise" described in EN 50332-1.</p> <p>– for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output level, integrated over one week, as described in EN50332-3, shall be ≤ 15 mV (analogue interface) or -30 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.</p>		N/A
10.6.4	Requirements for maximum sound exposure		N/A
10.6.4.1	<p>Measurement methods</p> <p>All volume controls shall be turned to maximum during tests.</p> <p>Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable.</p>		N/A
10.6.4.2	<p>Protection of persons</p> <p>Except as given below, protection requirements for parts accessible to ordinary persons, instructed persons and skilled persons are given in 4.3.</p> <p>NOTE 1 Volume control is not considered a safeguard.</p> <p>Between RS2 and an ordinary person, the basic</p>		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>safeguard may be replaced by an instructional safeguard in accordance with Clause F.5, except that the instructional safeguard shall be placed on the equipment, or on the packaging, or in the instruction manual.</p> <p>Alternatively, the instructional safeguard may be given through the equipment display during use.</p> <p>The elements of the instructional safeguard shall be as follows:</p> <p style="text-align: center;"></p> <ul style="list-style-type: none"> – element 1a: the symbol , IEC 60417-6044 (2011-01) – element 2: “High sound pressure” or equivalent wording – element 3: “Hearing damage risk” or equivalent wording – element 4: “Do not listen at high volume levels for long periods.” or equivalent wording <p>An equipment safeguard shall prevent exposure of an ordinary person to an RS2 source without intentional physical action from the ordinary person and shall automatically return to an output level not exceeding what is specified for an RS1 source when the power is switched off.</p> <p>The equipment shall provide a means to actively inform the user of the increased sound level when the equipment is operated with an output exceeding RS1. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an output exceeding RS1. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time.</p> <p>NOTE 2 Examples of means include visual or audible signals. Action from the user is always needed.</p> <p>NOTE 3 The 20 h listening time is the accumulative listening time, independent of how often and how long the personal music player has been switched off.</p> <p>A skilled person shall not be unintentionally exposed to RS3.</p>		
10.6.5	Requirements for dose-based systems		N/A
10.6.5.1	<p>General requirements</p> <p>Personal music players shall give the warnings as provided below when tested according to EN 50332-3, using the limits from this clause.</p> <p>The manufacturer may offer optional settings to</p>		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>allow the users to modify when and how they wish to receive the notifications and warnings to promote a better user experience without defeating the safeguards. This allows the users to be informed in a method that best meets their physical capabilities and device usage needs. If such optional settings are offered, an administrator (for example, parental restrictions, business/educational administrators, etc.) shall be able to lock any optional settings into a specific configuration.</p> <p>The personal music player shall be supplied with easy to understand explanation to the user of the dose management system, the risks involved, and how to use the system safely. The user shall be made aware that other sources may significantly contribute to their sound exposure, for example work, transportation, concerts, clubs, cinema, car races, etc.</p>		
10.6.5.2	<p>Dose-based warning and requirements</p> <p>When a dose of 100 % <i>CSD</i> is reached, and at least at every 100 % further increase of <i>CSD</i>, the device shall warn the user and require an acknowledgement. In case the user does not acknowledge, the output level shall automatically decrease to compliance with class RS1.</p> <p>The warning shall at least clearly indicate that listening above 100 % <i>CSD</i> leads to the risk of hearing damage or loss.</p>		N/A
10.6.5.3	<p>Exposure-based requirements</p> <p>With only dose-based requirements, cause and effect could be far separated in time, defying the purpose of educating users about safe listening practice. In addition to dose-based requirements, a PMP shall therefore also put a limit to the short-term sound level a user can listen at.</p> <p>The exposure-based limiter (EL) shall automatically reduce the sound level not to exceed 100 dB(A) or 150 mV integrated over the past 180 s, based on methodology defined in EN 50332-3.</p> <p>The EL settling time (time from starting level reduction to reaching target output) shall be 10 s or faster.</p> <p>Test of EL functionality is conducted according to EN 50332-3, using the limits from this clause. For equipment provided as a package (player with its listening device), the level integrated over 180 s shall be 100 dB or lower. For equipment provided with a standardized connector, the unweighted level</p>		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>integrated over 180 s shall be no more than 150 mV for an analogue interface and no more than -10 dBFS for a digital interface.</p> <p>NOTE In case the source is known not to be music (or test signal), the EL may be disabled.</p>		

10.6.6	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.6.1	<p>Corded listening devices with analogue input</p> <p>With 94 dB L_{Aeq} acoustic pressure output of the listening device, and with the volume and sound settings in the listening device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output, the input voltage of the listening device when playing the fixed “programme simulation noise” as described in EN 50332-1 shall be ≥ 75 mV.</p> <p>NOTE The values of 94 dB and 75 mV correspond with 85 dB and 27 mV or 100 dB and 150 mV.</p>		N/A
10.6.6.2	<p>Corded listening devices with digital input</p> <p>With any playing device playing the fixed “programme simulation noise” described in EN 50332-1, and with the volume and sound settings in the listening device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output, the $L_{Aeq,\tau}$ acoustic output of the listening device shall be ≤ 100 dB with an input signal of -10 dBFS.</p>		N/A
10.6.6.3	<p>Cordless listening devices</p> <p>In cordless mode,</p> <ul style="list-style-type: none"> – with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and – respecting the cordless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and – with volume and sound settings in the receiving device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the above mentioned programme simulation noise, the $L_{Aeq,\tau}$ acoustic output of the listening device shall be ≤ 100 dB with an input signal of -10 dBFS. 		N/A
10.6.6.4	Measurement method		N/A



IEC 62368-1							
Clause	Requirement + Test				Result - Remark		Verdict
	<i>Measurements shall be made in accordance with EN 50332-2 as applicable.</i>						
3	Modification to the whole document						—
	Delete all the “country” notes in the reference document according to the following list:						N/A
	0.2.1	Note 1 and 2	1	Note 4 and 5	3.3.8.1	Note 2	
	3.3.8.3	Note 1	4.1.15	Note	4.7.3	Note 1 and 2	
	5.2.2.2	Note	5.4.2.3.2.2 Table 12	Note c	5.4.2.3.2.4	Note 1 and 3	
	5.4.2.3.2.4 Table 13	Note 2	5.4.2.5	Note 2	5.4.5.1	Note	
	5.4.10.2.1	Note	5.4.10.2.2	Note	5.4.10.2.3	Note	
	5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3 and 4	
	5.6.8	Note 2	5.7.6	Note	5.7.7.1	Note 1 and Note 2	
	8.5.4.2.3	Note	10.2.1 Table 39	Note 3 and 4 and 5	10.5.3	Note 2	
	10.6.4	Note 3	F.3.3.6	Note 3	Y.4.1	Note	
	Y.4.5	Note					
4	Modification to Clause 1						—
1	Add the following note:						P
	<i>NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.</i>						
5	Modification to 4.Z1						—



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.Z1	<p>Add the following new subclause after 4.9:</p> <p>To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. mains, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment;</p> <p>b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;</p> <p>c) it is permitted for pluggable equipment type B or permanently connected equipment, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for pluggable equipment type A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>		N/A
6	Modification to 5.4.2.3.2.4		—
5.4.2.3.2.4	<p>Add the following to the end of this subclause:</p> <p>The requirement for interconnection with external circuit is in addition given in EN 50491-3:2009.</p>		N/A
7	Modification to 10.2.1		—
10.2.1	<p>Add the following to ^{c)} and ^{d)} in table 39:</p> <p>For additional requirements, see 10.5.1.</p>		N/A
8	Modification to 10.5.1		—



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	<p>Add the following after the first paragraph:</p> <p>For RS 1 compliance is checked by measurement under the following conditions:</p> <p>In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or pre-sets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.</p> <p>NOTE Z1 Soldered joints and paint lockings are examples of adequate locking.</p> <p>The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.</p> <p>Moreover, the measurement shall be made under fault conditions causing an increase of the high voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.</p> <p>For RS1, the dose-rate shall not exceed 1 μSv/h taking account of the background level.</p> <p>NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.</p>		N/A
9	Modification to G.7.1		—
G.7.1	<p>Add the following note:</p> <p>NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.</p>		P
10	Modification to Bibliography		—



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Add the following notes for the standards indicated:</p> <p>IEC 60130-9 NOTE Harmonized as EN 60130-9. IEC 60289-2 NOTE Harmonized as HD 60289-2. IEC 60309-1 NOTE Harmonized as EN 60309-1. IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series. IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4. IEC 60664-5 NOTE Harmonized as EN 60664-5. IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified). IEC 61508-1 NOTE Harmonized as EN 61508-1. IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1. IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4. IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6. IEC 61643-1 NOTE Harmonized as EN 61643-1. IEC 61643-21 NOTE Harmonized as EN 61643-21. IEC 61643-311 NOTE Harmonized as EN 61643-311. IEC 61643-321 NOTE Harmonized as EN 61643-321. IEC 61643-331 NOTE Harmonized as EN 61643-331.</p>		N/A
11	ADDITION OF ANNEXES		—
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		—
4.1.15	<p>Denmark, Finland, Norway and Sweden</p> <p>To the end of the subclause the following is added: Class I pluggable equipment type A intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment shall be connected to an earthed mains socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Denmark: "Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord." In Finland: "Laitte on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag"</p>		P



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.3	<p>United Kingdom</p> <p>To the end of the subclause the following is added:</p> <p>The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex</p>		N/A
5.2.2.2	<p>Denmark</p> <p>After the 2nd paragraph add the following:</p> <p>A warning (marking safeguard) for high touch current is required if the touch current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.</p>		N/A
5.4.11.1 and Annex G	<p>Finland and Sweden</p> <p>To the end of the subclause the following is added:</p> <p>For separation of the telecommunication network from earth the following is applicable:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> • two layers of thin sheet material, each of which shall pass the electric strength test below, or • one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> • passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), <p>and</p> <ul style="list-style-type: none"> • is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5 kV. <p>It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005,</p>		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>subclass Y2.</p> <p>A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11; the additional testing shall be performed on all the test specimens as described in EN 60384-14; <p>the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.</p>		
5.5.2.1	<p>Norway</p> <p>After the 3rd paragraph the following is added:</p> <p>Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).</p>		N/A
5.5.6	<p>Finland, Norway and Sweden</p> <p>To the end of the subclause the following is added:</p> <p>Resistors used as basic safeguard or bridging basic insulation in class I pluggable equipment type A shall comply with G.10.1 and the test of G.10.2.</p>		N/A
5.6.1	<p>Denmark</p> <p>Add to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. <i>Justification:</i> In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.</p>		N/A
5.6.4.2.1	<p>Ireland and United Kingdom</p> <p>After the indent for pluggable equipment type A, the following is added: – the protective current rating is taken to be 13 A, this being the largest rating of fuse used in the mains plug.</p>		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.6.4.2.1	<p>France</p> <p>After the indent for pluggable equipment type A, the following is added: – in certain cases, the protective current rating of the circuit supplied from the mains is taken as 20 A instead of 16 A.</p>		N/A
5.6.5.1	<p>To the second paragraph the following is added:</p> <p>The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm² to 1,5 mm² in cross-sectional area.</p>		N/A
5.6.8	<p>Norway</p> <p>To the end of the subclause the following is added: Equipment connected with an earthed mains plug is classified as class I equipment. See the Norway marking requirement in 4.1.15. The symbol IEC 60417-6092, as specified in F.3.6.2, is accepted.</p>		N/A
5.7.6	<p>Denmark</p> <p>To the end of the subclause the following is added:</p> <p>The installation instruction shall be affixed to the equipment if the protective conductor current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.</p>		N/A
5.7.6.2	<p>Denmark</p> <p>To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA.</p>		N/A
5.7.7.1	<p>Norway and Sweden</p> <p>To the end of the subclause the following is added: The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system.</p> <p>It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example.</p> <p>The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what</p>		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>country the equipment is intended to be used in:</p> <p>“Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)”</p> <p>NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p> <p>Translation to Norwegian (the Swedish text will also be accepted in Norway):</p> <p>“Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplede utstyr – og er tilkoplede et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet.”</p> <p>Translation to Swedish: ”Apparater som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.”</p>		
8.5.4.2.3	<p>United Kingdom</p> <p>Add the following after the 2nd dash bullet in 3rd paragraph:</p> <p>An emergency stop system complying with the requirements of IEC 60204-1 and ISO 13850 is required where there is a risk of personal injury.</p>		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
B.3.1 and B.4	<p>Ireland and United Kingdom</p> <p>The following is applicable:</p> <p>To protect against excessive currents and short-circuits in the primary circuit of direct plug-in equipment, tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the direct plug-in equipment, until the requirements of Annexes B.3.1 and B.4 are met</p>		N/A

G.4.2	<p>Denmark</p> <p>To the end of the subclause the following is added:</p> <p>Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a polyphase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.</p> <p>Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,0.5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a.</p> <p>Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.</p> <p>Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a</p> <p><i>Justification:</i> Heavy Current Regulations, Section 6c</p>		P
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IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	<p>United Kingdom</p> <p>To the end of the subclause the following is added:</p> <p>The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16, and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.</p>		P
G.7.1	<p>United Kingdom</p> <p>To the first paragraph the following is added:</p> <p>Equipment which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc. (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, unless exempted by those regulations.</p> <p>NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>		P
G.7.1	<p>Ireland</p> <p>To the first paragraph the following is added:</p> <p>Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard</p>		P
G.7.2	<p>Ireland and United Kingdom</p> <p>To the first paragraph the following is added:</p> <p>A power supply cord with a conductor of 1,25 mm² is allowed for equipment which is rated over 10 A and up to and including 13 A.</p>		N/A
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		—



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
10.5.2	<p>Germany</p> <p>The following requirement applies:</p> <p>For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking.</p> <p><i>Justification:</i> German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM.</p> <p>NOTE Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int+49-531-592-6320, Internet: http://www.ptb.de</p>		N/A
ZD	IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS (EN)		—



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Type of flexible cord	Code designations		P
	IEC	CENELEC	
PVC insulated cords			
Flat twin tinsel cord	60227 IEC 41	H03VH-Y	
Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F	
Ordinary polyvinyl chloride sheathed flexible cord	60227 IEC 53	H05VV-F H05VVH2-F	
Rubber insulated cords			
Braided cord	60245 IEC 51	H03RT-F	
Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F	
Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F	
Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F	
Cords having high flexibility			
Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H	
Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H	
Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H	
Cords insulated and sheathed with halogen-free thermoplastic compounds			
Light halogen-free thermoplastic insulated and sheathed flexible cords		H03Z1Z1-F H03Z1Z1H2-F	
Ordinary halogen-free thermoplastic insulated and sheathed flexible cords		H05Z1Z1-F H05Z1Z1H2-F	



Photos



Photo 1: Description front view

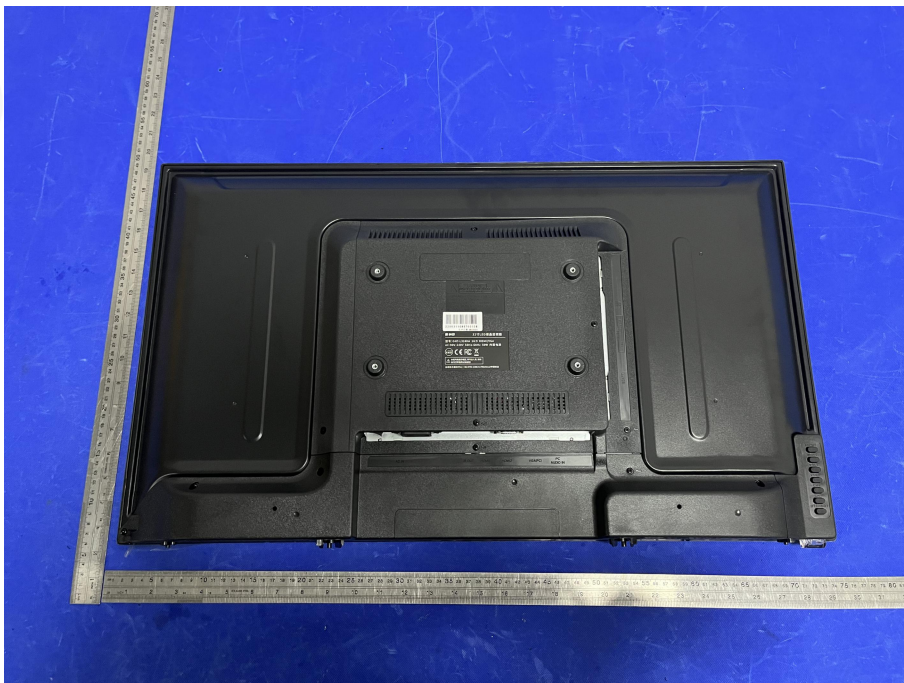


Photo 2: Description back view



Photo 3: Internal view

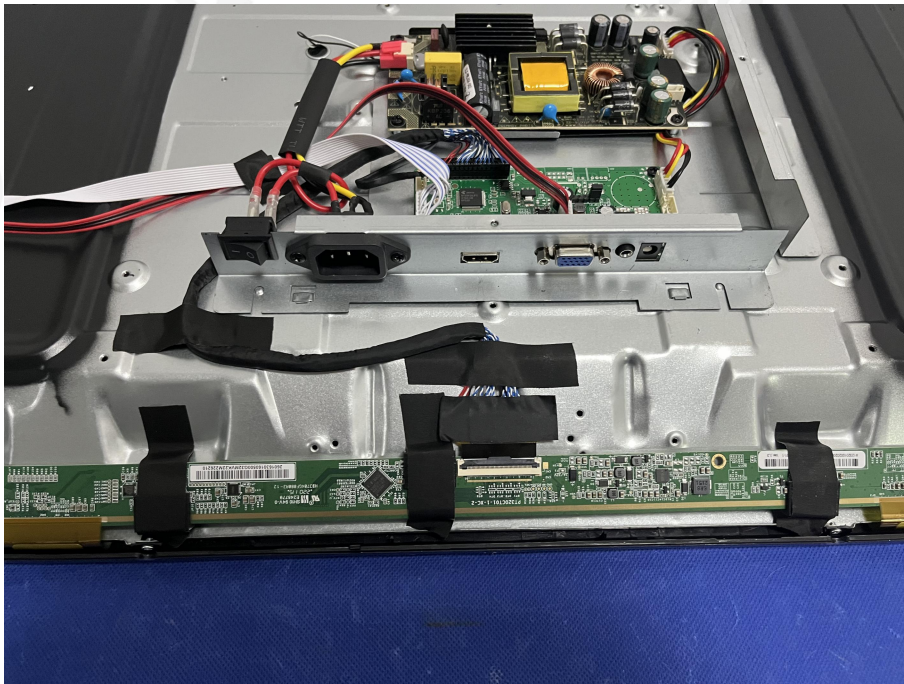


Photo 4: Front view of PCB

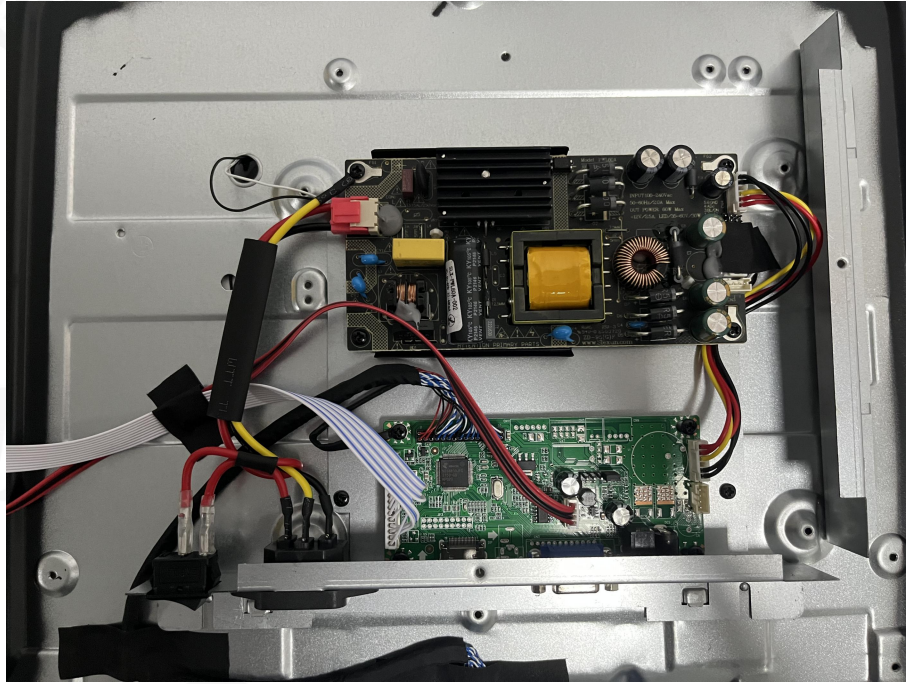


Photo 5: Back view of PCB